

Preliminary CVRP Projections: 2021–2023: Update 4

New methodology implemented that is intended to account for impact of the COVID-19 pandemic and other factors. Under review and subject to change.

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Transparency and Insights



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With thanks to Francis Alvarez, Shira Orlowek, Keir Havel, James Tamerius, Meghna Eluganti and others at CSE

Outline

1. [Rebate Demand Context](#)
2. [Projected Rebate Demand](#)
 - Method
 - Three-year demand forecast
 - Progress toward state goals
3. [Additional Program Context](#)



Projected Rebate Demand

Projections Updates Since June 30 Workgroup

Updates

- Forecasts updated to include CVRP data from June and July 2021
- No longer separately adjusting for 400% FPL adjustment (captured in five months of CVRP data)

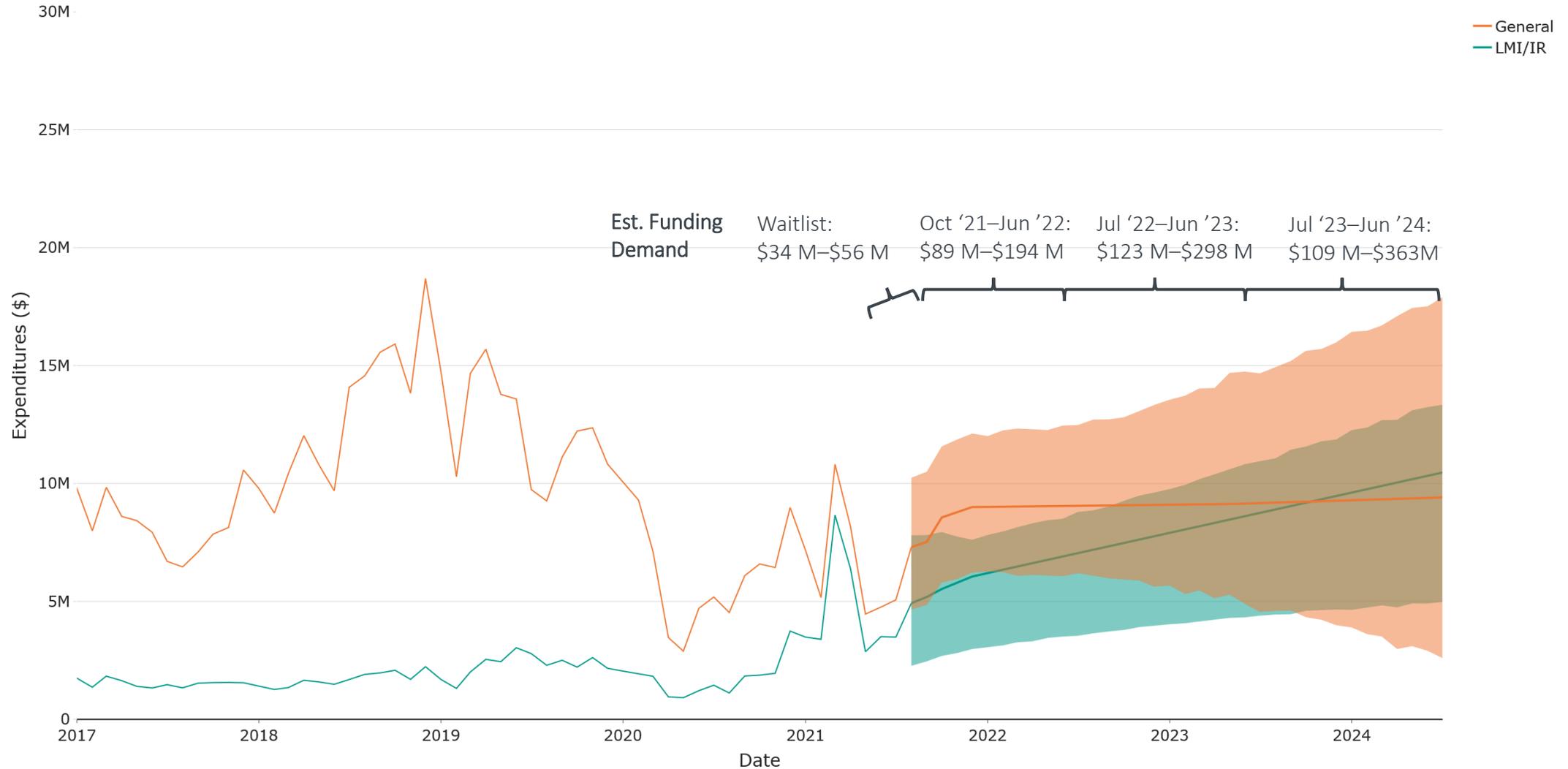
Impacts

- **24% reduction in overall projected funding demand**
 - Largely driven by 39% reduction in projected LMI-IR demand

Method, Rebate, and EV Sales Data

- Method Described in Previous Workgroup Presentation:
 - [Preliminary 2021–2023 CVRP Projections: Update 3 with Additional Context](#)
- CVRP Rebate Data: March 2010–July 2021
- EV Sales Data: March 2010–January 2021*
- Changes:
 - Removed 400% FPL LMI-IR eligibility threshold adjustment

Funding Demand Over Time



Ribbons indicate min. and max. estimates in three-year demand estimates

Three-year Program Demand Estimates: Totals

Year	Rebate Type	Projected Funding Demand (millions)			Projected Rebates (thousands)		
		Min.	Median	Max.	Min.	Median	Max.
May 19, 2021 – Jun 2024	Standard and DAC-Fleet Increased	\$202	\$348	\$530	96	165	256
	Lower-Income Increased Rebates	\$154	\$302	\$381	34	67	84
	Total Need	\$356	\$650	\$911	130	231	340
3-Year Average (excluding waitlist)		\$107	\$202	\$285	39	71	106
3-Year Average (including waitlist in first year)		\$119	\$217	\$304	43	77	113
Budgeted		\$515			186	183	191
Difference from proposed budget*		+\$159	-\$135	-\$396	+57	-48	-147

* Surplus = +, deficit = -

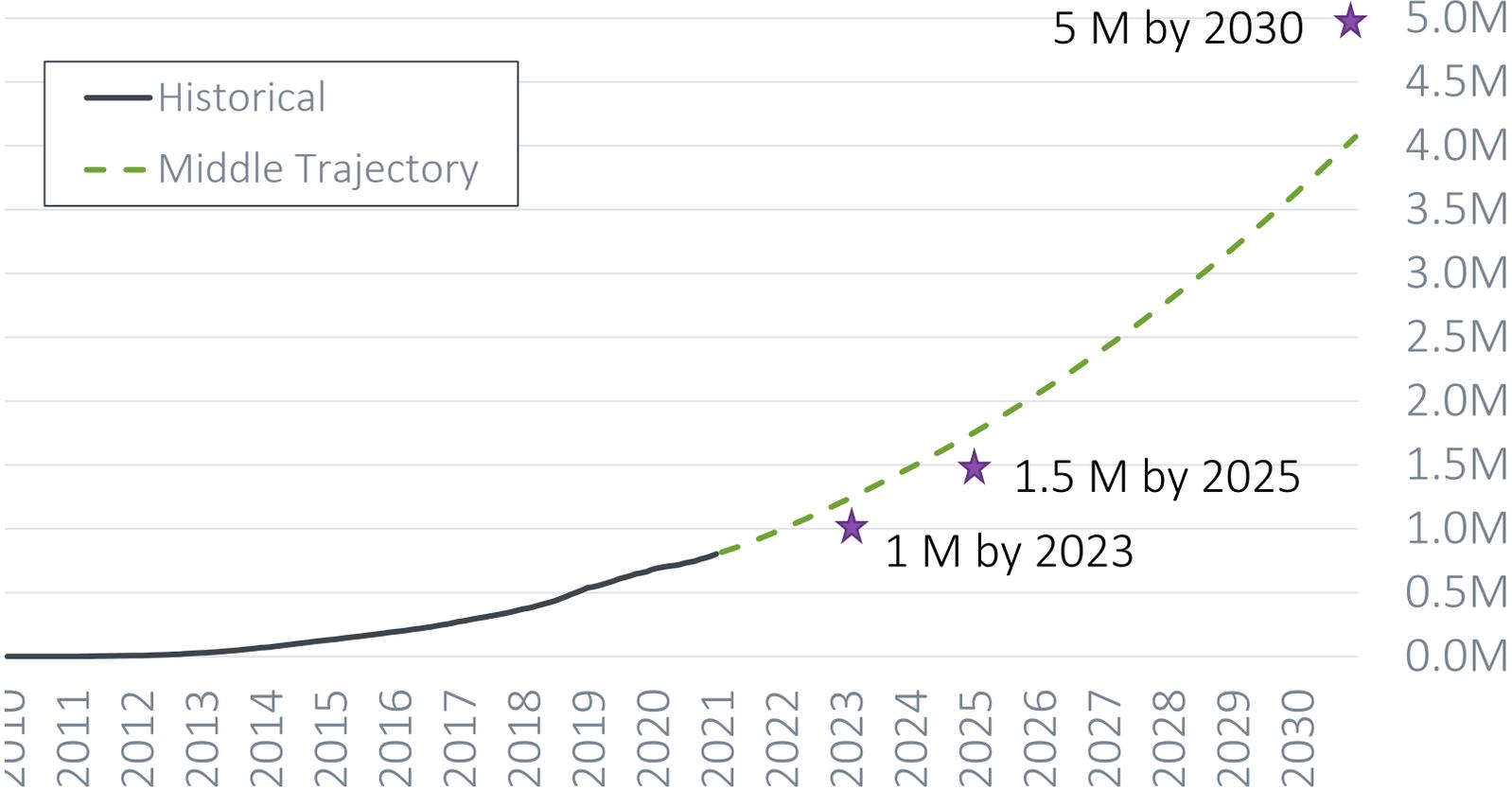
Assumes no changes in federal or state incentive levels.

Three-year Program Demand Estimates: Fiscal Years

Year	Rebate Type	Projected Funding Demand (millions)			Projected Rebates (thousands)		
		Min.	Median	Max.	Min.	Median	Max.
Waitlist: May 19, 2021 – Sep 30, 2021	Standard and DAC-Fleet Increased	\$21	\$27	\$32	10	13	16
	Lower-Income Increased Rebates	\$13	\$18	\$24	3	4	5
	Total Need	\$34	\$45	\$56	13	17	21
Oct 2021 – Jun 2022	Standard and DAC-Fleet Increased	\$59	\$86	\$117	28	41	57
	Lower-Income Increased Rebates	\$30	\$61	\$78	7	13	17
	Total Need	\$89	\$147	\$194	35	55	74
Jul 2022 – Jun 2023	Standard and DAC-Fleet Increased	\$72	\$117	\$173	34	55	84
	Lower-Income Increased Rebates	\$51	\$101	\$125	11	22	28
	Total Need	\$123	\$217	\$298	45	77	111
Jul 2023 – Jun 2024	Standard and DAC-Fleet Increased	\$50	\$119	\$207	23	56	100
	Lower-Income Increased Rebates	\$60	\$123	\$155	13	27	34
	Total Need	\$109	\$242	\$363	36	83	134
3-Year Average (excluding waitlist)		\$107	\$202	\$285	39	71	106
3-Year Average (including waitlist in first year)		\$119	\$217	\$304	43	77	113

Assumes no changes in federal or state incentive levels.

Progress Toward State Goals



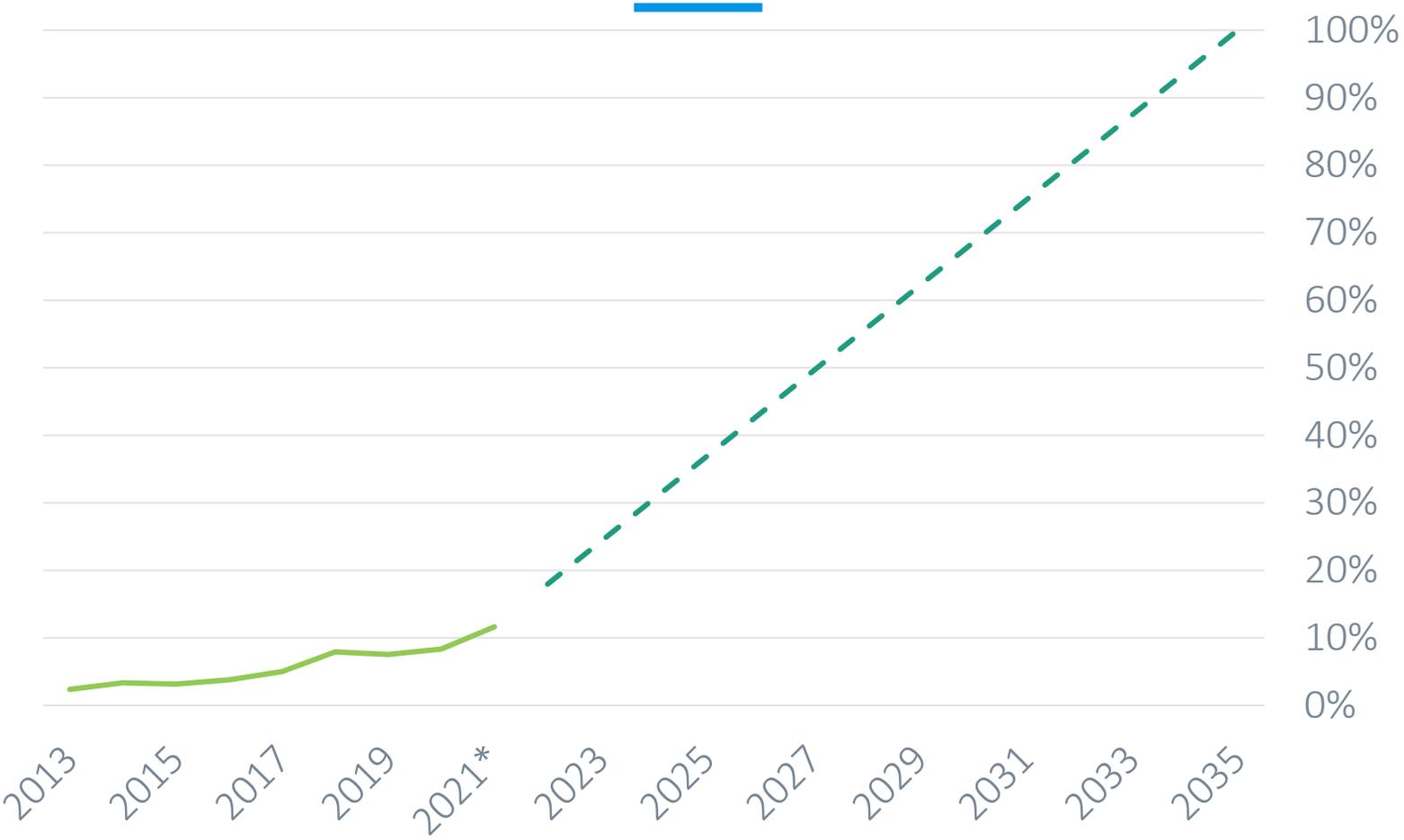
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Estimated Funding Needed to Reach 16% Market Share

- Utilizes CSE's Caret-EV Analyzer decision-making platform
- Assumes:
 - 40% CVRP participation
 - a \$7,500 federal tax credit incentive with a \$70k MSRP cap

Projected Accomplishment Date	Summer 2024
Estimated Cost	\$1.1 Billion

Steep Growth Needed to Reach 100% Market Share



Draft Program Change Impacts

Considerations

- Stepdown standard rebate with time- and cumulative-sales-based triggers
- Continuous funding for LMI-IR
- Maintain a version of Standard Rebates through fiscal year 2023–2024
- Avoid funding interruptions

Program Levers

	Details	Rebate Impact	Sales Impact
MSRP Cap Bifurcation and reduction	Split MSRP cap into “cars” and “large vehicles”; lower MSRP cap for cars	Low	Low
Income Cap Reduction	Set separately for single, head-of-household, and joint filers	High	Medium
AER-Minimum Increase	Based on EPA-based all-electric range	Low	Low
LMI-IR Eligibility Threshold	Reduce to 300% FPL	Medium	Low
Reduce Rebate Amounts	\$250 increments, applies to all rebate types	High	Low
Make PHEVs ineligible		Low	Low
Limited-time Offer	Six- or four-month standard rebate periods	High	High
Annual per-OEM cap	20,000 standard rebates per year	Medium	Low

Draft Scenarios

Design Lever	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
MSRP Cap Bifurcation and reduction	Feb 2022: Cars = \$40k	Feb 2022: Cars = \$40k	Feb 2022: Cars = \$40k	Feb 2022: Cars = \$40k	Feb 2022: Cars = \$40k
Income Cap Reduction (single/head-house/joint)	Feb 2022: \$135k/\$175k/\$200k Feb 2023: \$120k/\$160k/\$185k	Feb 2022: \$120k/\$160k/\$185k	Feb 2022: \$120k/\$160k/\$185k	Feb 2022: \$120k/\$160k/\$185k	Feb 2022: \$135k/\$175k/\$200k Feb 2023: \$120k/\$160k/\$185k
LMI-IR Eligibility Threshold	Feb 2022: Reduce to 300% FPL	N/A	N/A	N/A	N/A
Reduce Rebate Amounts (all rebate types)	Feb 2022: -\$250 Feb 2023: -\$250	N/A	N/A	N/A	Feb 2023: -\$250
Make PHEVs ineligible	Feb 2023	Feb 2023	Feb 2023	Feb 2023	Feb 2023
Limited-time Offer	N/A	N/A	Apr–Sep 2022 & 2023	N/A	N/A
Annual per-OEM cap	N/A	N/A	N/A	Jan 2022: 20,000 standard rebates/yr	N/A

Draft Overall Impact (Middle Scenario)

	Budget Sav. Vs. baseline	Rebate diff.	Sales diff.*	3-year fund. demand	Over/under budget
Baseline	-	-	-	\$650 M	
Scenario 1	-\$263 M	-75,000	-41,000	\$387 M	Under: \$128 M
Scenario 2	-\$123 M	-56,000	-30,000	\$528 M	Over: \$13 M
Scenario 3	-\$169 M	-78,000	-42,000	\$482 M	Under: \$33 M
Scenario 4	-\$157 M	-73,000	-40,000	\$494 M	Under: \$21 M
Scenario 5	-\$147 M	-58,000	-31,000	\$503 M	Under: \$12 M

* Assuming 54% rebate essentiality

Caveats:

- Program changes likely overlap to a degree. These estimates do not model that overlap and may therefore over-estimate differences.

Market Sustainability and Monitoring

Monitoring Ideas

Program

- Rebate essentiality
- Average vehicle purchase price
- Income distribution among participants

Market

- State sales goals
- State market share goals
- Vehicle options: models, vehicle classes, price points
- Used vehicle market
- Market share by price
- Federal Tax Incentive Status

Appendix: Program Change Estimate Details

Scenario 1

- Feb 2022:
 - MSRP cap bifurcation and lowering to \$40k for cars
 - Reduce threshold for LMI-IR eligibility to 300% FPL
 - Income cap reduced:
 - Single filers: \$150k → \$135k
 - Head-of-household filers: \$204k → \$175k
 - Joint filers: \$300k → \$200k
 - Reduce rebate \$250 for all categories
- Feb 2023:
 - Income cap reduced
 - Single filers: \$135k → \$120k
 - Head-of-household filers: \$175k → \$160k
 - Joint filers: \$200k → \$185k
 - Reduce rebate \$250 for all categories
 - PHEVs phased out

Scenario 2

- Feb 2022
 - MSRP cap bifurcation and lowering to \$40k for cars
 - Income cap adjustment (both reductions)
 - Single filers: \$150k → \$120k
 - Head-of-household filers: \$204k → \$160k
 - Joint filers: \$300k → \$185k
- Feb 2023
 - PHEV phased out

Scenario 3

- Scenario 2 applied
- Standard rebate paused after FY 2020–21 amendment funding fully reserved: Approx. November 2021
- Standard rebate starts with program changes on 1 Apr 2022
 - Runs for six months

Scenario 4

- Scenario 2 applied
- Starting 1 Jan 2022 manufacturers capped at 20,000 standard rebates per year

Adjust Model Minimum MSRP Cap

Implementation:
February 2022

Details:

- Split MSRP cap into “cars” and “large vehicles”
 - Cars = hatchbacks, sedans, two-seaters, wagons
 - Large vehicles = minivans, pickups, SUVs
- Reduce maximum model-minimum MSRP for cars to \$40,000

Takeaways:

- Excludes: BMW i3 (all variants), Ford Mustang Mach-E, Polestar 2
- Possibly affected future vehicles may increase impact:
 - Genesis GV60, Audi A6 e-tron, BMW i4, BMW X1, Hyundai Ioniq 6
- Model-minimum MSRP approach relatively easy to understand

Estimated program impact:

	3-year Impact (Middle Scenario)
Budget	-\$6 M
Rebates	-2,000
EV Sales	-1,100

*Assuming 54% rebate essentiality

Reduce Income Cap

Implementation:
February 2022

Details:

- Reduce income cap:
 - Single filers: \$150k → \$135k
 - Head-of-household filers: \$204k → \$175k
 - Joint filers: \$300k → \$200k

Estimated program impact:

	3-year Impact (Middle Scenario)
Budget	-\$96 million
Rebates	-45,000
EV Sales	-25,000

*Assuming 54% rebate essentiality

Increase Minimum All-electric Range

Implementation:
February 2022

Details:

- Increase minimum all-electric range to 35 miles by EPA rating

Takeaways:

- Excludes the Chrysler Pacifica PHEV (32 miles AER)
 - 6%–27% of projected PHEVs, 1%–3% overall projected rebates, 0%–4% projected LMI-IR
- Possibly affected future vehicles may increase impact:
 - Kia Sorrento PHEV, Hyundai Tucson PHEV, Hyundai Santa Fe PHEV (range TBD)

Estimated program impact:

	3-year Impact (Middle Scenario)
Budget	-\$1 M
Rebates	-400
EV Sales	-200

*Assuming 54% rebate essentiality

Reduce Threshold for LMI-IR Eligibility

Implementation:
February 2022

Details:

- Revert threshold for LMI-IR eligibility to 300% FPL
- -34%–36% LMI-IR, +13%–15% Standard)

Takeaways:

- Alignment with other programs an important consideration
- Change in distribution of income among LMI-IR participants in the last two months:

	Distribution of Rebates Under 400% FPL	
FPL Level	Feb. 2021 – Apr. 2021	May 2021 – July 2021
0 – 225% FPL	41%	38%
226-300% FPL	24%	25%
301-400% FPL	35%	37%

Estimated program impact:

	3-year Impact
Budget	-\$78 M
Rebates	-11,000
EV Sales	-7,400

*Assuming -2.5 price elasticity of demand

Reduce Rebate by \$250

Implementation:
February 2022

Details:

- Standard and increased rebates

Takeaways:

- Possible administrative challenge related to more rebates to process with budget savings

Estimated program impact:

	3-year Impact
Budget	-\$56 M
Rebates	3,100
EV Sales	3,100

*Assuming -2.5 price elasticity of demand

Make PHEVs Ineligible

Implementation:
February 2023

Details:

- Applies to both standard and increased rebates
- Estimated impact relative to all February 2022 changes

Takeaways:

- Excludes:
 - Honda Clarity PHEV, Ford Escape PHEV, Toyota RAV4 Prime
- Possibly affected future vehicles:
 - Hyundai Santa Fe PHEV (may be excluded by minimum range increase in at 1M sales)
- Based on CVRP Consumer Survey there is the possibility of applicants transitioning to a BEV or FCEV (transitions excluded from modeling)

Estimated program impact:

	3-year Impact
Budget	-\$2 M
Rebates	-700
EV Sales	-400

*Assuming 54% rebate essentiality

Reduce Rebate by \$250

Implementation:
February 2023

Details:

- Applies to both standard and increased rebates
- Estimated impact relative to all February 2022 changes

Takeaways:

- Possible administrative challenge related to more rebates to process with budget savings

Estimated program impact:

	3-year Impact
Budget	-\$22 M
Rebates	-1,200
EV Sales	-1,200

*Assuming -2.5 price elasticity of demand

Reduce Income Cap

Implementation:
February 2023

Details:

- Reduce income cap:
 - Single filers: \$135k → \$120k
 - Head-of-household filers: \$175k → \$160k
 - Joint filers: \$200k → \$185k
- Impact estimates assume all February 2022 changes applied

Estimated program impact:

	3-year Impact
Budget	-\$18 M
Rebates	-9,500
EV Sales	-5,100

*Assuming 54% rebate essentiality

Limited-time Offer for Standard Rebates

Implementation:
April 2022

Details:

- Standard rebate program would be paused at the end of November 2022
- Standard rebate would resume for four or six months starting in April 2022
- Estimated impact relative to Scenario 2
- Assumes 54% of forecast rebates during the paused months are deferred to the first month of the limited time offer

Estimated program impact:

	3-year Impact
Budget	-\$38 M
Rebates	-34,000
EV Sales	-19,000

Annual Per-OEM Cap

Implementation:
January 2022/23

Details:

- Limit standard rebates by manufacturer to 20,000 per year
- After 1.5 million sales: reduce cap to 10,000 per year
- Estimated impact relative to Scenario 2

Estimated program impact:

	3-year Impact
Budget	-\$38 M
Rebates	-19,000
EV Sales	-11,000

*Assuming 54% rebate essentiality