Preliminary CVRP Projections: 2021–2023: Update 2

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

June 4, 2021

James Tamerius, John Anderson, Colin Evans and Keir Havel

Transparency and Insights

With thanks to Andrew Chesser, John Gartner, Ryan O'Connor, and others at CSE
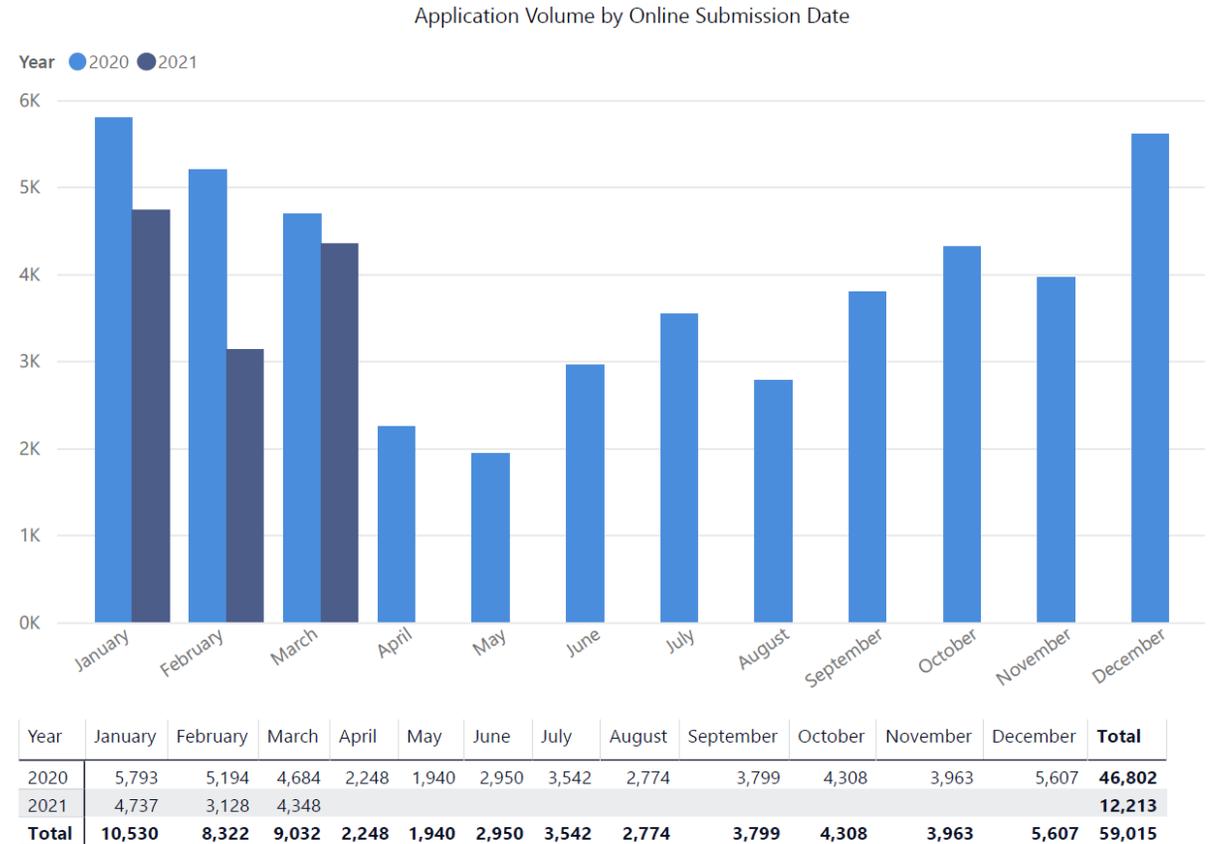
Center for Sustainable Energy™

Method Overview: Prophet

- Based on open-source tools developed by Facebook https://facebook.github.io/prophet/

- Simulates market conditions and rebate demand based on estimates of market recovery following the COVID-19 pandemic

- Includes estimates of the impact of CFR, increasing the LMI-IR income threshold to 400% FPL, and the PHEV minimum electric-range change

- Adjusts for the large increase in sales after the release of the Tesla Model 3 in 2018 and the pent-up demand in winter 2020-21

- Adjusts for increased uncertainty due to rapid increase in LMI-IR demand in Spring 2021

- Assumes linear growth for most vehicle categories and rebate types

- Assumes state and federal incentives remain constant
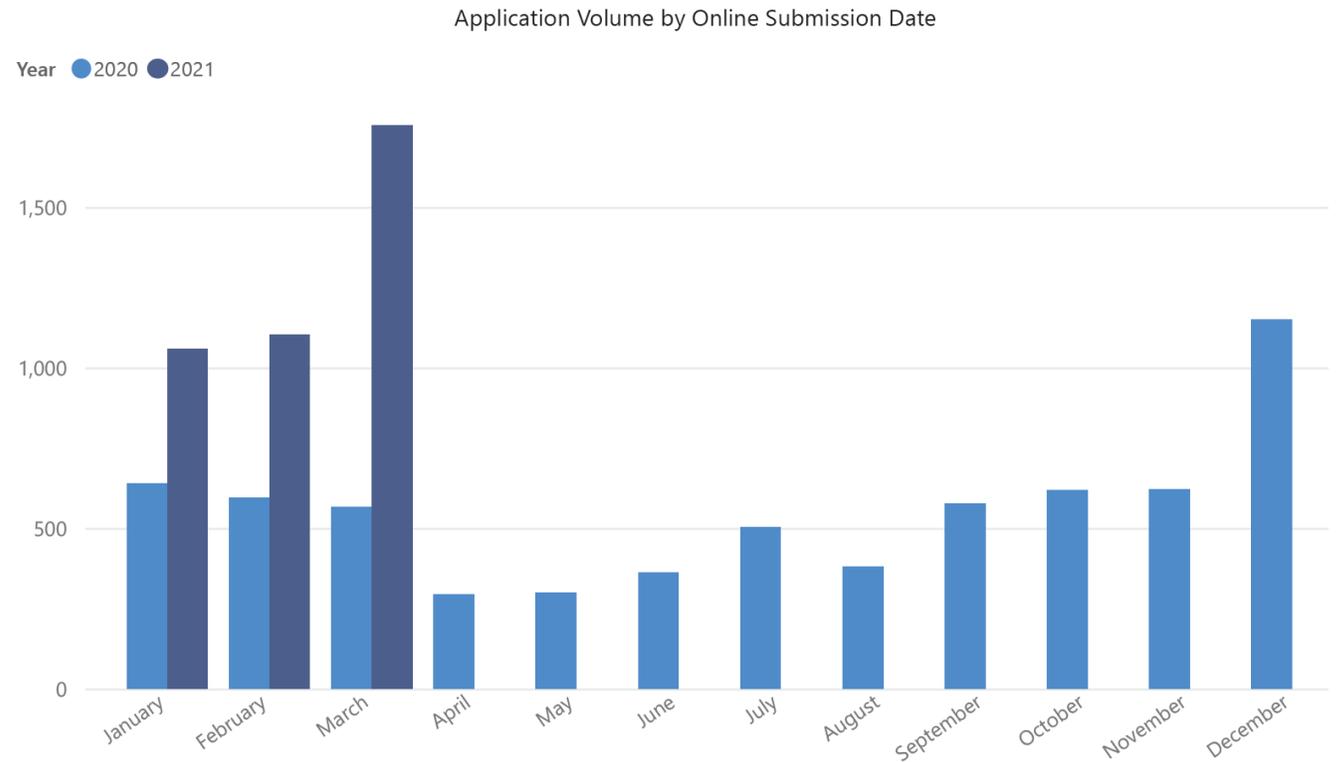
Standard Rebate Applications

- Due to Covid-19, application volumes dropped starting in April 2020 and returned to previous levels in December
- Standard rebate reductions in 2021 over the prior year due in part to expansion of LMI rebate program up to 400% FPL

Application Volume by Online Submission Date

Year ● 2020 ● 2021

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	5,793	5,194	4,684	2,248	1,940	2,950	3,542	2,774	3,799	4,308	3,963	5,607	**46,802**
2021	4,737	3,128	4,348										**12,213**
Total	**10,530**	**8,322**	**9,032**	**2,248**	**1,940**	**2,950**	**3,542**	**2,774**	**3,799**	**4,308**	**3,963**	**5,607**	**59,015**

Includes approved, in-progress, and cancelled applications

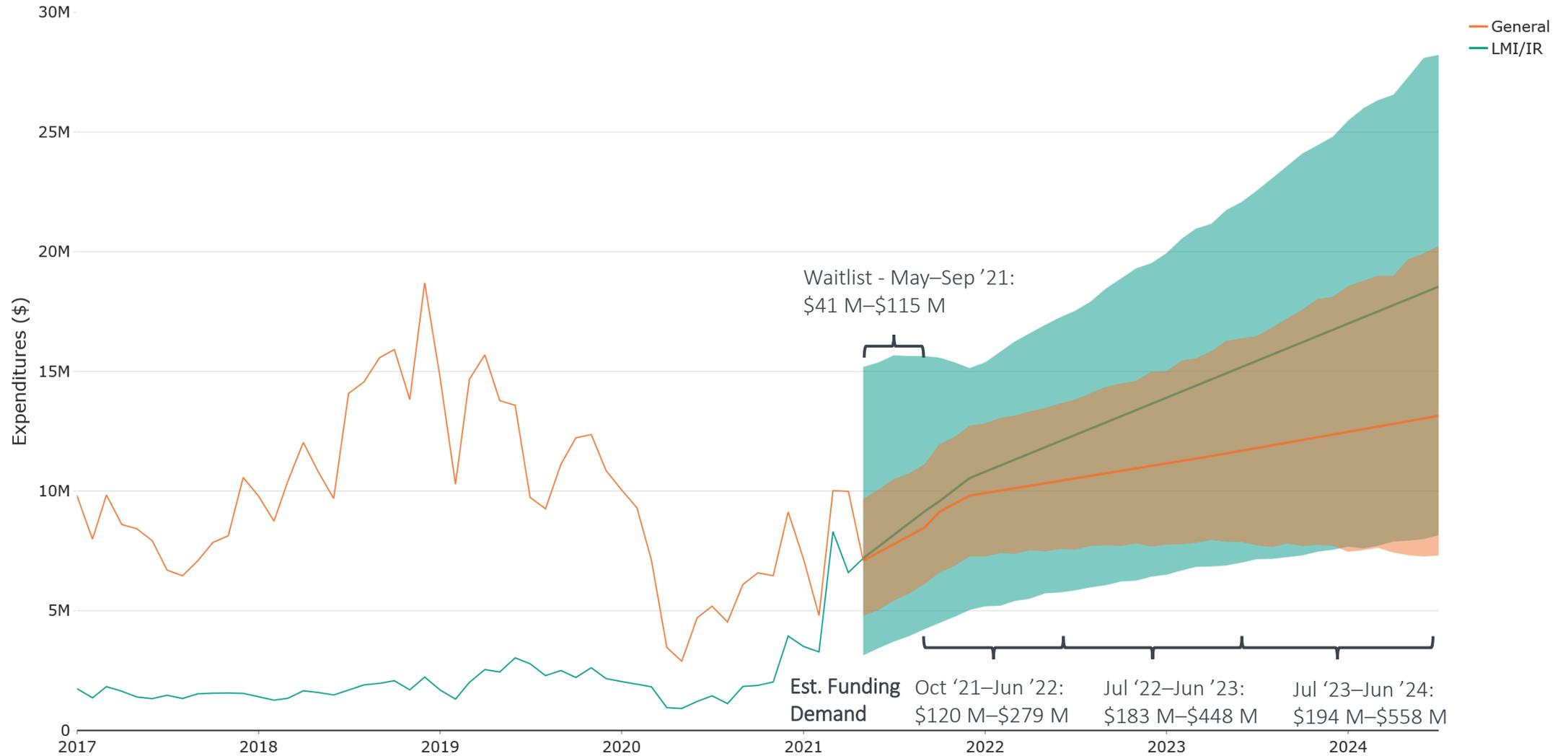# Low-/Moderate-Income Increased Rebate Applications

- Large increase in Low-/Moderate-Income Increased Rebates starting in December 2020

- Increased rebates as a percentage of total applications also increasing: 24% in Q1 2021 to date, compared to 10% during Q1 2020

Application Volume by Online Submission Date

Year ● 2020 ● 2021

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	638	594	567	294	298	361	502	380	576	618	622	1,150	6,600
2021	1,058	1,102	1,754										3,914
Total	1,696	1,696	2,321	294	298	361	502	380	576	618	622	1,150	10,514

Includes approved, in-progress, and cancelled applications
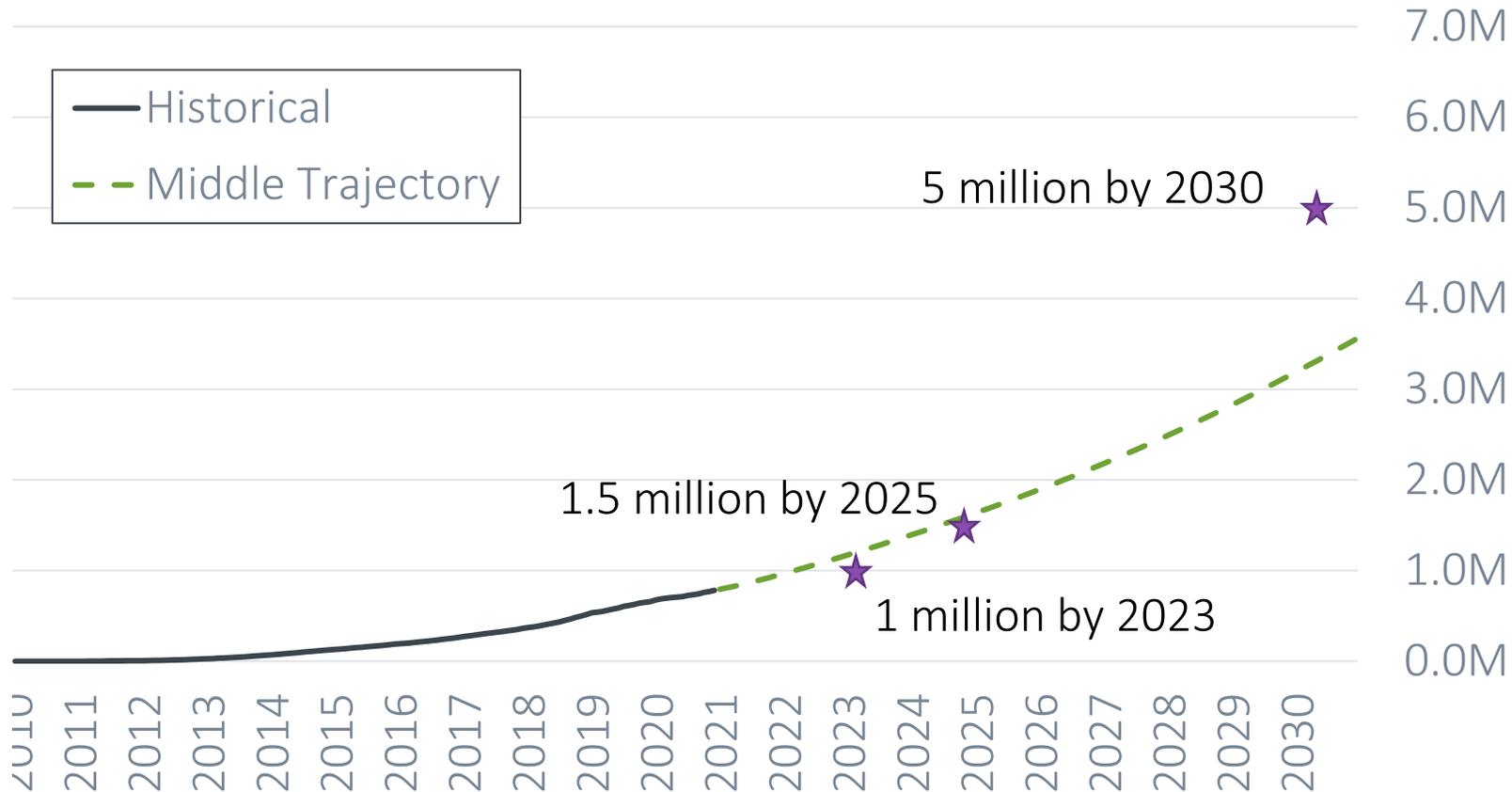
4

Funding Demand Over Time

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

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	$24	$35	$47	12	16	22
	Lower-Income Increased Rebates	$17	$37	$68	4	8	15
	Total Need	$41	$71	$115	15	25	37
Oct 2021 – Jun 2022	Standard and DAC-Fleet Increased	$70	$96	$125	33	46	60
	Lower-Income Increased Rebates	$50	$106	$154	11	24	35
	Total Need	$120	$201	$279	44	69	94
Jul 2022 – Jun 2023	Standard and DAC-Fleet Increased	$100	$142	$194	48	67	92
	Lower-Income Increased Rebates	$83	$177	$255	18	39	57
	Total Need	$183	$319	$448	66	106	149
Jul 2023 – Jun 2024	Standard and DAC-Fleet Increased	$97	$159	$235	47	75	112
	Lower-Income Increased Rebates	$97	$217	$324	21	48	72
	Total Need	$194	$376	$558	68	123	184
3-Year Average		$166	$299	$428	59	99	143

Assumes no changes in federal or state incentive levels.

Progress Toward State Goals

Assumes no changes in federal or state incentive levels.

Contains content from IHS Markit© 2020.

Preliminary modeling with Caret™ algorithm, CSE's proprietary EV diffusion modeling software, suggests a change to policy mix may be needed to reach goals.

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

Planned Refinements and Next Steps

- Upcoming PEV models release regressor
- Other regressors found to be predictive of EV sales
- Seasonality
- Regional forecasting
- Monthly refresh