Preliminary CVRP Projections: 2021–2023: Update 1

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

March 29, 2021

James Tamerius, John Anderson, Colin Evans and Keir Havel

Transparency and Insights

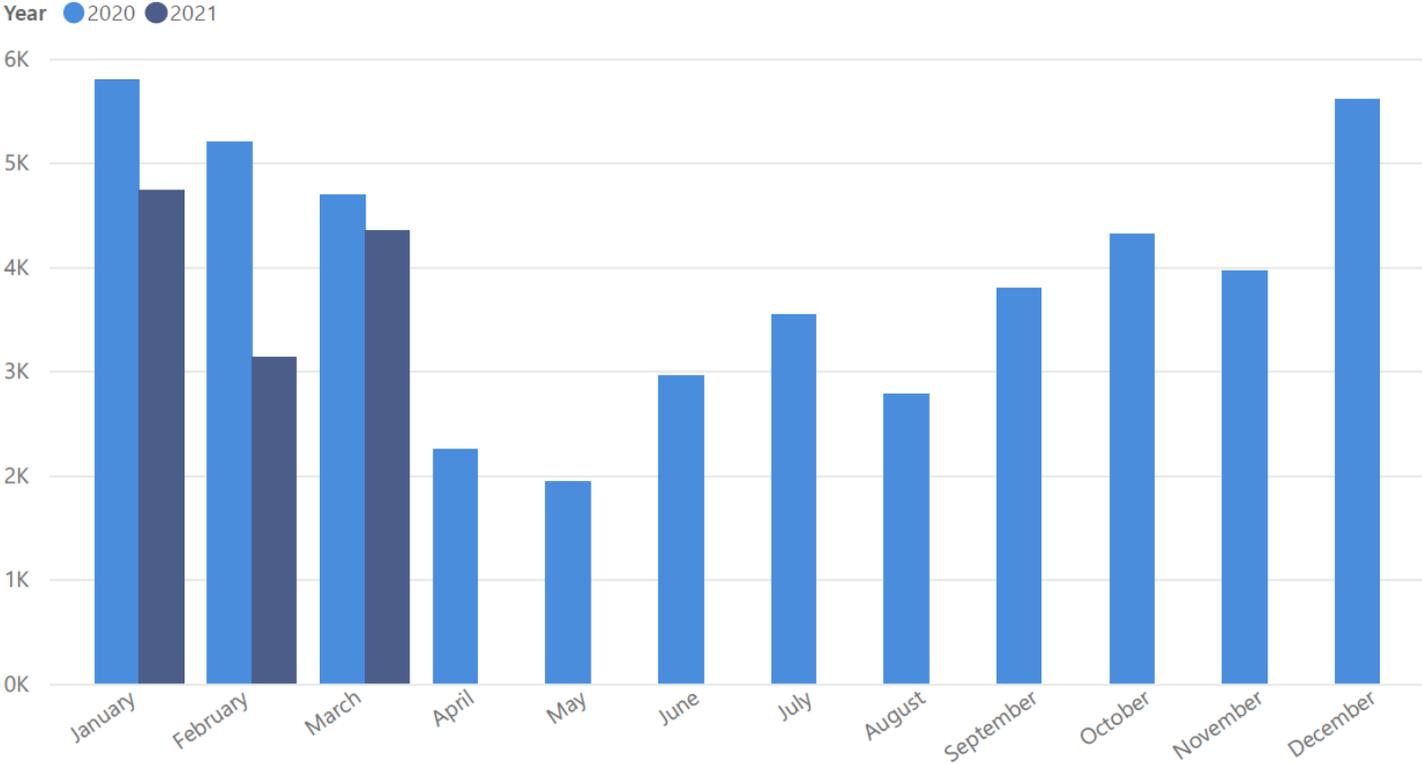With thanks to Andrew Chesser, John Gartner, Ryan O'Connor, and others at CSE

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

- Assumes linear growth for most vehicle categories and rebate types

- Assumes state and federal incentives remain constant

Standard Rebate Applications
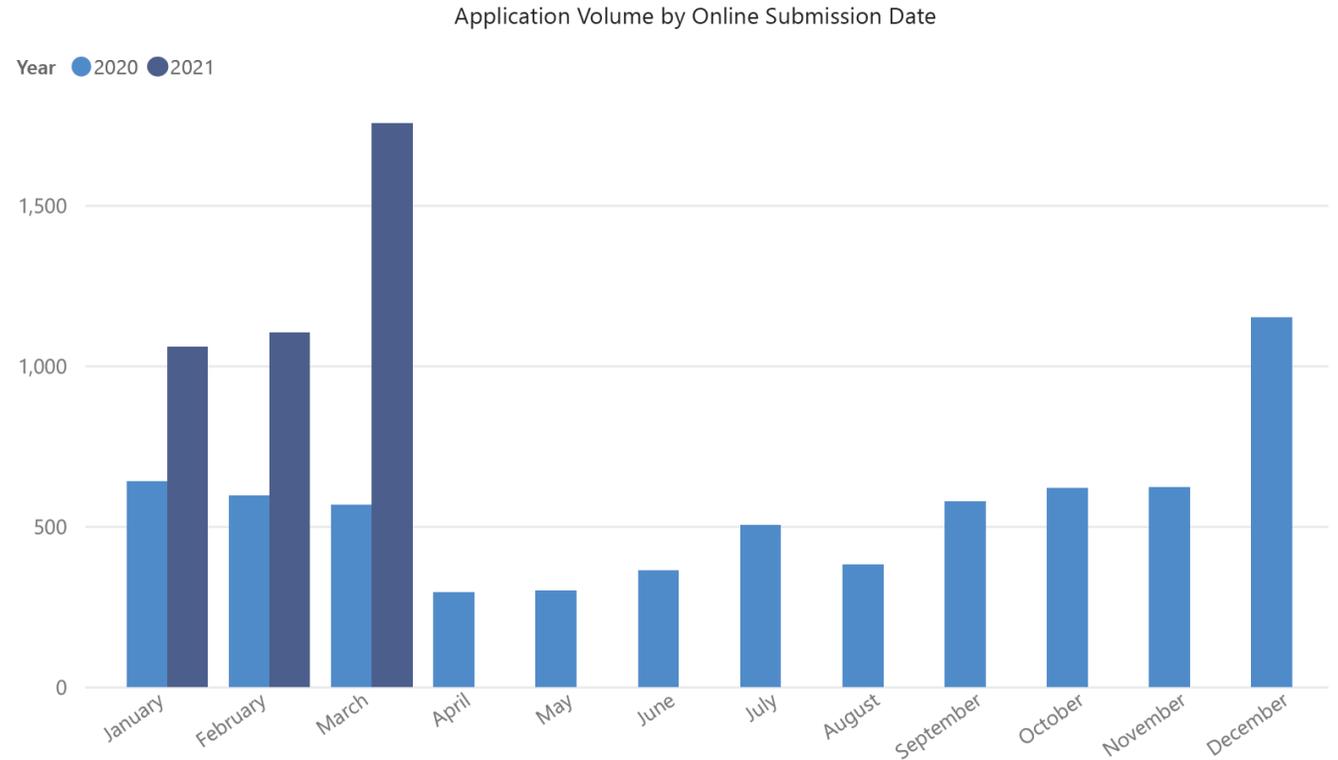
Application Volume by Online Submission Date

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

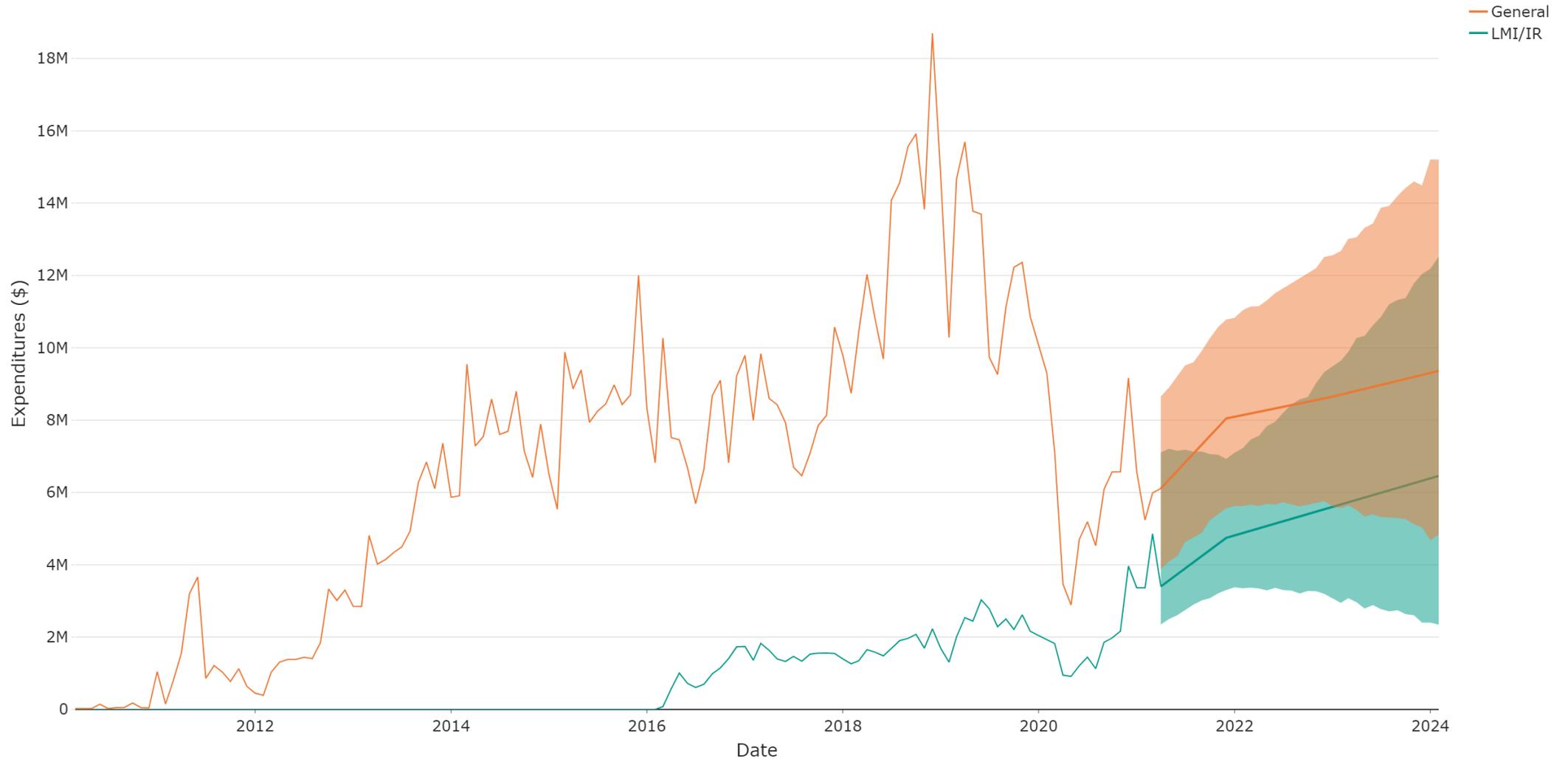# Low-/Moderate-Income Increased Rebate Applications

- 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

Funding Demand Over Time

Ribbons indicate 95% confidence interval

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Three-year Program Demand Estimates: Fiscal Years

Fiscal Year	Rebate Type	Projected Funding Demand (millions)			Projected Rebates (thousands)		
		Min.	Median	Max.	Min.	Median	Max.
Jun 2021	Standard and DAC-Fleet Increased	$5	$7	$10	2	3	5
	Lower-Income Increased Rebates	$3	$4	$8	0.6	0.8	2
	Total Need	$8	$11	$18	3	4	6
Jul 2021 – Jun 2022	Standard and DAC-Fleet Increased	$68	$100	$137	32	46	64
	Lower-Income Increased Rebates	$41	$60	$94	9	13	20
	Total Need	$110	$160	$231	41	59	83
Jul 2022 – Jun 2023	Standard and DAC-Fleet Increased	$71	$111	$161	33	51	75
	Lower-Income Increased Rebates	$40	$71	$119	8	15	25
	Total Need	$111	$182	$281	41	66	100
Jul 2023 – Jun 2024	Standard and DAC-Fleet Increased	$65	$119	$194	30	55	90
	Lower-Income Increased Rebates	$34	$82	$157	7	17	33
	Total Need	$99	$201	$351	37	72	123
3-Year Average		$106	$181	$287	40	66	102

Assumes no changes in federal or state incentive levels.
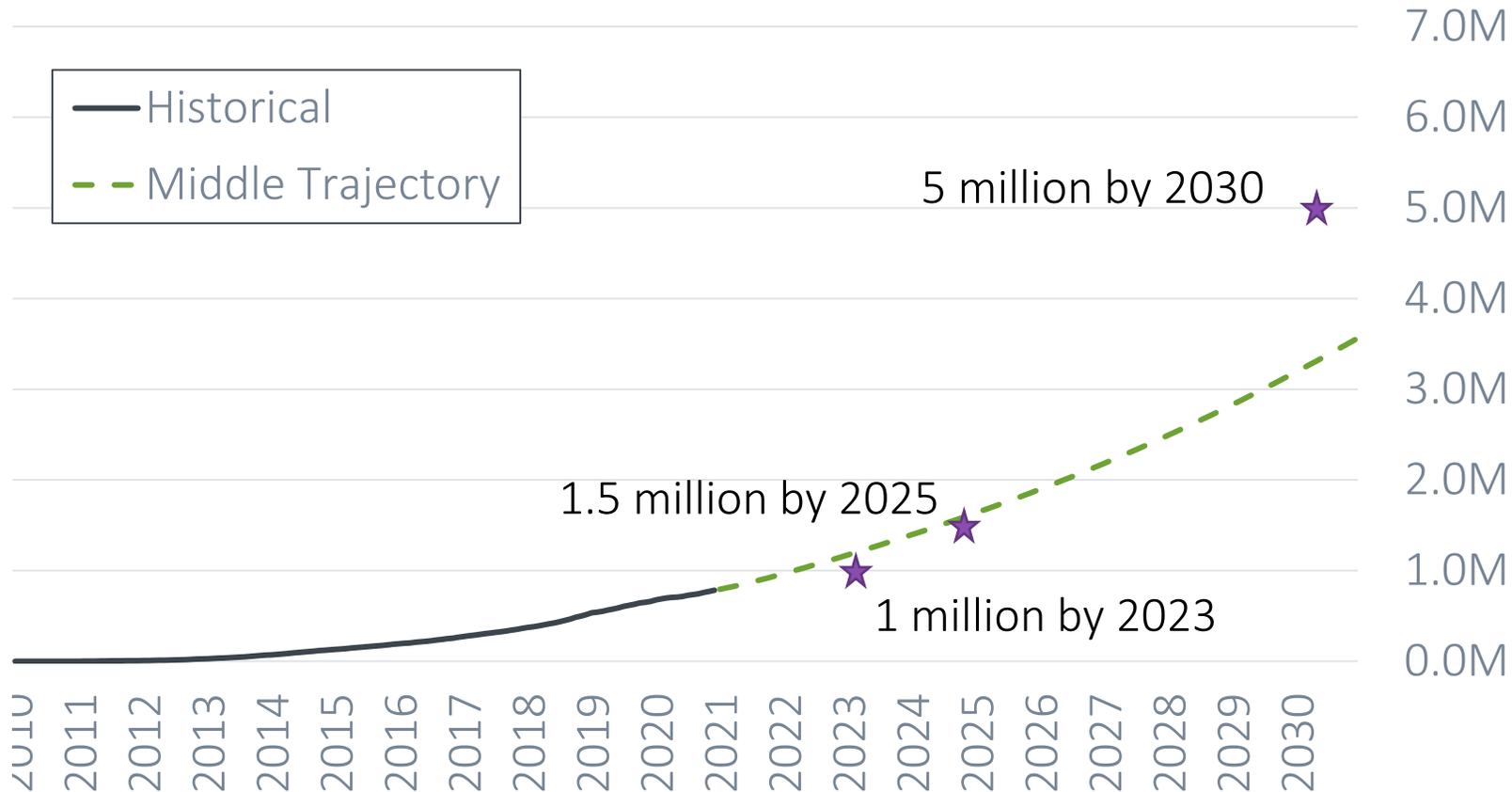
Estimated End of Funding

	Soonest	Median	Latest
General	May 2021	Jun 2021	Jul 2021
LMI-IR	May 2021	Jul 2021	Sep 2021

Based on remaining funding as of 17 Mar 2021.

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.

Planned Refinements and Next Steps

- Upcoming PEV models release regressor

- Other regressors found to be predictive of EV sales

- Seasonality

- Regional forecasting

- Monthly refresh