

CVRP Participant Characteristics

An Application Data Derived Update

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Center for
Sustainable
Energy®

Other Consumer Characteristics Resources:

Publications



- ❖ B.D.H. Williams (2023, forthcoming), Assessing Progress and Equity in the Distribution of Electric Vehicle Rebates Using Appropriate Comparisons. *Transport Policy*.
- ❖ B.D.H. Williams and N. Pallonetti (2023, Jun.), New York State’s Drive Clean Rebate for Electric Vehicles: Measures of Impact, *36th International Electric Vehicle Symposium (EVS36)*, EDTA.
- B.D.H Williams and J.B. Anderson (2022, Sep.), [From Low Initial Interest to Electric Vehicle Adoption: “EV Converts” in New York State’s Rebate Program](#), *Transportation Research Record: Journal of the Transportation Research Board*. Includes open-access data-summary [appendix](#). DOI: 10.1177/03611981221118537
- B.D.H. Williams (2022, Jun.), [Targeting Incentives Cost Effectively: “Rebate Essential” Consumers in the New York State Electric Vehicle Rebate Program](#), Procs. *35th International Electric Vehicle Symposium (EVS35)*, Session A3, AVERE. [Paper](#). [Slides](#).
- ❖ B.D.H. Williams, J.B. Anderson (2022, Jun.), [Lessons Learned About Electric Vehicle Consumers Who Found the U.S. Federal Tax Credit Extremely Important in Enabling Their Purchase](#), Procs. *35th International Electric Vehicle Symposium (EVS35)*, Session H3, AVERE. [Paper](#). [Slides](#).
- ❖ B.D.H. Williams (2021, Oct.), [An Electric-Vehicle Consumer Segmentation Roadmap: Strategically Amplifying Participation in the New York Drive Clean Rebate Program](#), Report 21-30, *Clean Transportation Reports*, NYSERDA.
- B.D.H. Williams and J. B. Anderson (2021, Mar.), [“Strategically Targeting Plug-In Electric Vehicle Rebates and Outreach Using ‘EV Convert’ Characteristics,”](#) *Energies*, vol. 14, no. 7, p. 1899. DOI: 10.3390/en14071899.
- ❖ B.D. Williams, J. Orose, M. Jones, J.B. Anderson (2018, Oct.), [Summary of Disadvantaged Community Responses to the Electric Vehicle Consumer Survey, 2013–2015 Edition](#), Clean Vehicle Rebate Project, San Diego CA. DOI: 10.13140/RG.2.2.36500.58243
- B.D. Williams, J.B. Anderson (2018, Sep.), [Strategically Targeting Plug-in Electric Vehicle Rebates and Outreach Using Characteristics of ‘Rebate-Essential’ Consumers in 2016–2017](#), in: 31st Int. Electr. Veh. Symp. (EVS31), Society of Automotive Engineers of Japan, Inc., Kobe, Japan.
- ❖ C. Johnson, B.D. Williams, C. Hsu, J.B. Anderson, [Summary Documentation of the Electric Vehicle Consumer Survey, 2013–2015 Edition](#), Clean Vehicle Rebate Project, San Diego CA, 2017.

Other Consumer Characteristics Resources:

Select Presentations & Video



- [Lessons Learned About Electric Vehicle Consumers Who Rated the U.S. Federal Tax Credit ‘Extremely Important’ in Enabling Their Purchase](#), in procs. *35th International Electric Vehicle Symposium (EVS35)*, Session H3, AVERE. DOI: 10.13140/RG.2.2.32943.61602. [Paper](#). (2022, Jun. 15)
- [Targeting Incentives Cost Effectively: ‘Rebate Essential’ Consumers in the New York State Electric Vehicle Rebate Program](#), *35th International Electric Vehicle Symposium (EVS35)*, Session A3, AVERE. DOI: 10.13140/RG.2.2.22877.28640. [Paper](#). (2022, Jun. 13)
- ❖ Video: [“HEC 2022 Panel - Electrification and Transportation,”](#) opening presentation minutes 2–10; 40-minute panel total. [Slides](#). (2022, May)
- ❖ CARB Video: [“CVRP 2020 Data Brief: Consumer Characteristics,”](#) time 1:05:43–1:26:09. [Slides](#). DOI: 10.13140/RG.2.2.19493.58089. Related paper forthcoming. (2022, Mar.)
- [Data from Statewide Electric Vehicle Rebate Programs: Vehicles, Consumers, Impacts, and Effectiveness](#) (2021, Jul.)
- [EV Purchase Incentives: Program Design, Outputs, and Outcomes of Four Statewide Programs with a Focus on Massachusetts](#) DOI: 10.13140/RG.2.2.13166.08001. (2020, Dec.)
- [Electric Vehicle Incentives and Policies](#) DOI: 10.13140/RG.2.2.34976.46089. (2019, Nov.)
- [CVRP: Data and Analysis Update](#) DOI: 10.13140/RG.2.2.12750.33609. (2018, Dec.)
- [Electric Vehicle Rebates: Exploring Indicators of Impact in Four States](#) DOI: 10.13140/RG.2.2.21138.94404. (2018, Jun.)
- Yale Webinar: [“Supporting EV Commercialization with Rebates: Statewide Programs, Vehicle & Consumer Data, and Findings,”](#) 58 minutes. [Slides](#). (2017, Apr.)
- ❖ [Electric Vehicle Rebates in Disadvantaged Communities: Evaluating Progress with Appropriate Comparisons](#) (2016, Oct.)
- [Implementation Status Update](#) (2015, Dec.)

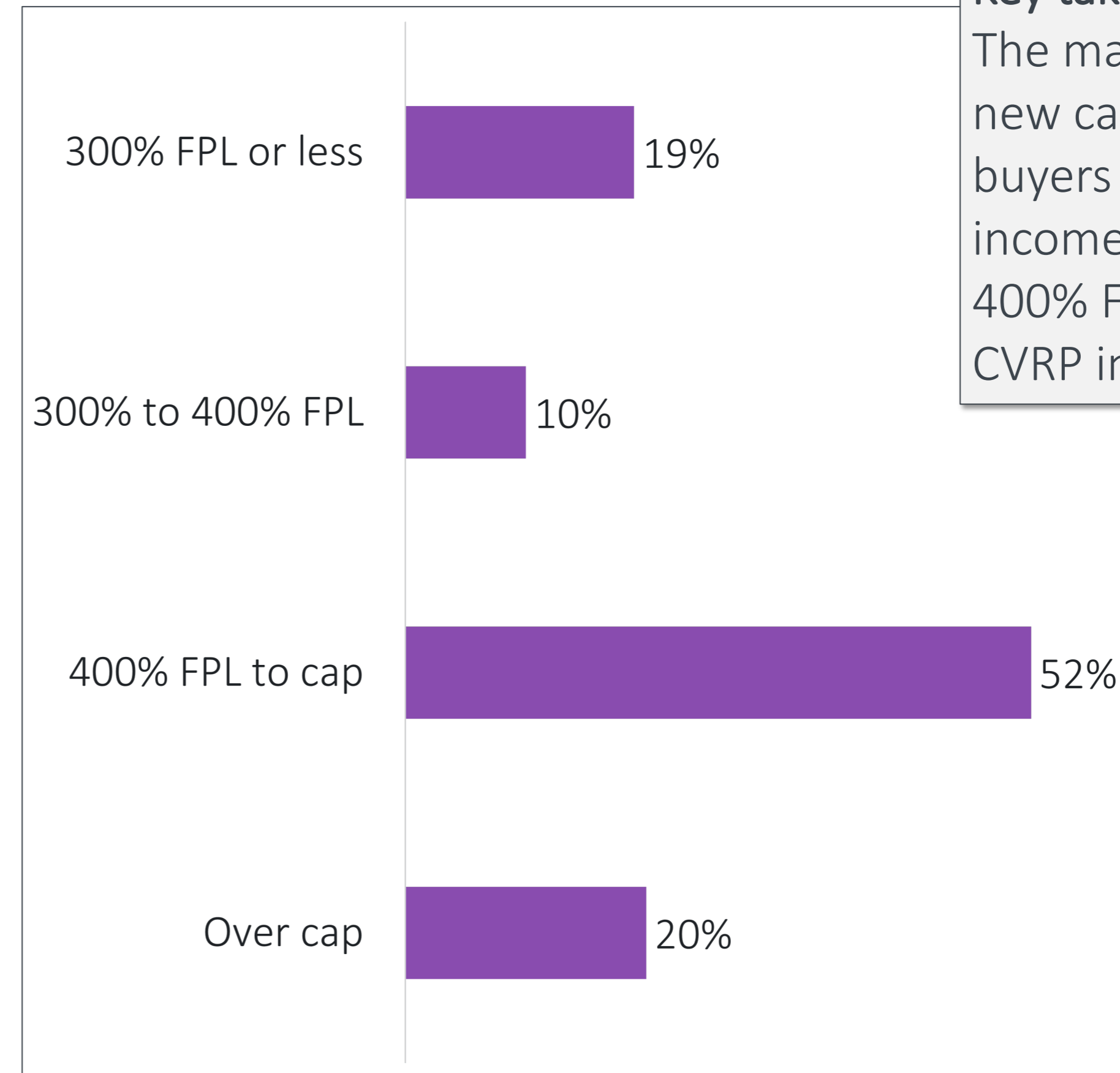
Participant Characteristics

New Car Market Composition: Income

- Federal Poverty Level is defined by income and household size. For example, for a household size of 4:

Year	FPL	400% FPL
2020	\$26,200	\$104,800
2021	\$26,500	\$106,000
2022	\$26,500	\$106,000

- CVRP Income Cap
 - \$250,000 for single individuals,
 - \$340,000 for a head of household,
 - \$500,000 for joint filing



Key takeaway:
The majority of 2019 new car market buyers reported income between 400% FPL and the CVRP income cap.

CVRP Application Data

Applicant types: Individual only

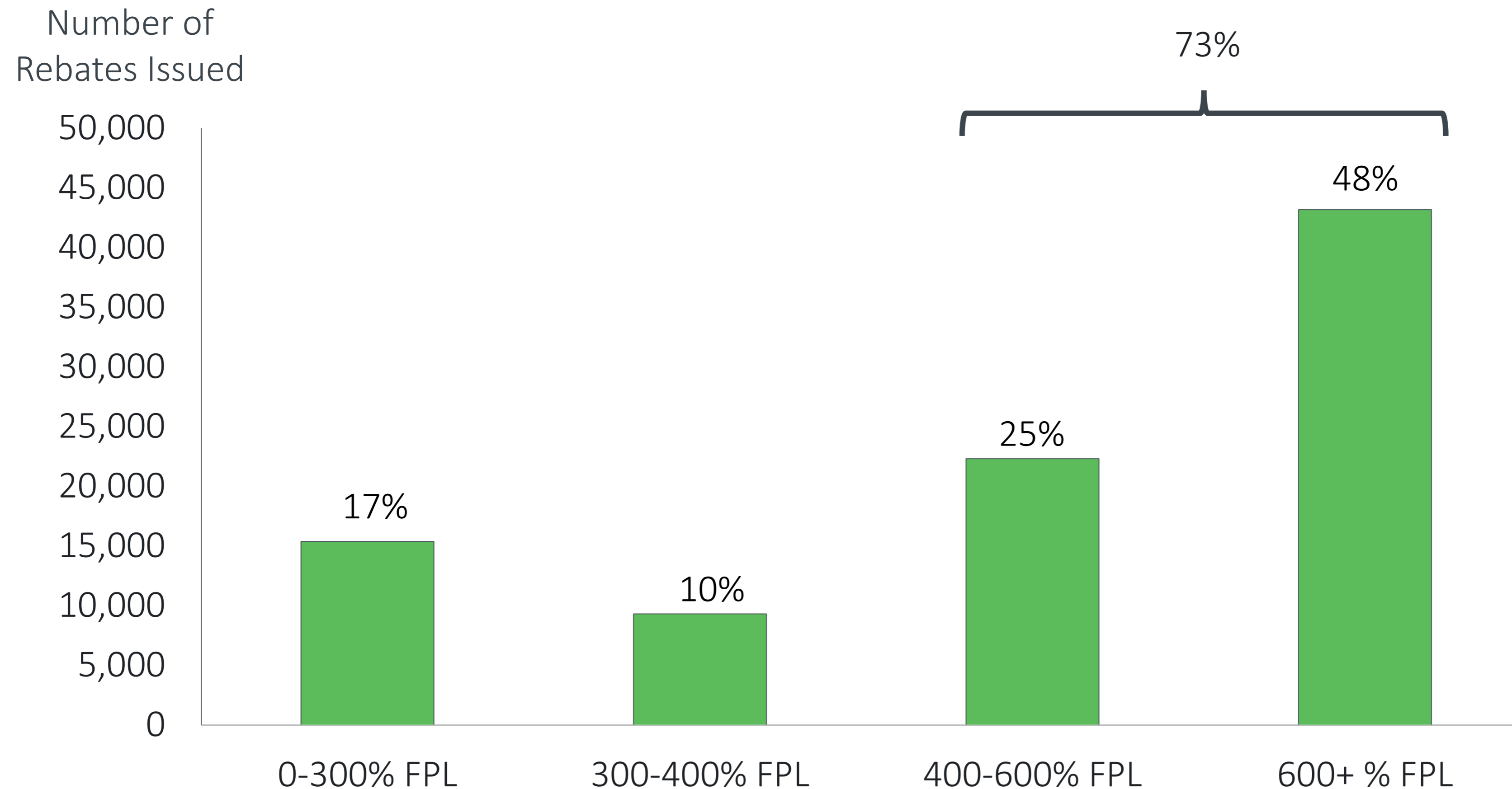
Purchase date range: Apr. 9, 2019 to Feb. 16, 2023

Application date range: Jan. 1, 2021 to Mar. 1, 2023

Application status: Approved applications only

Total applications: 90,149

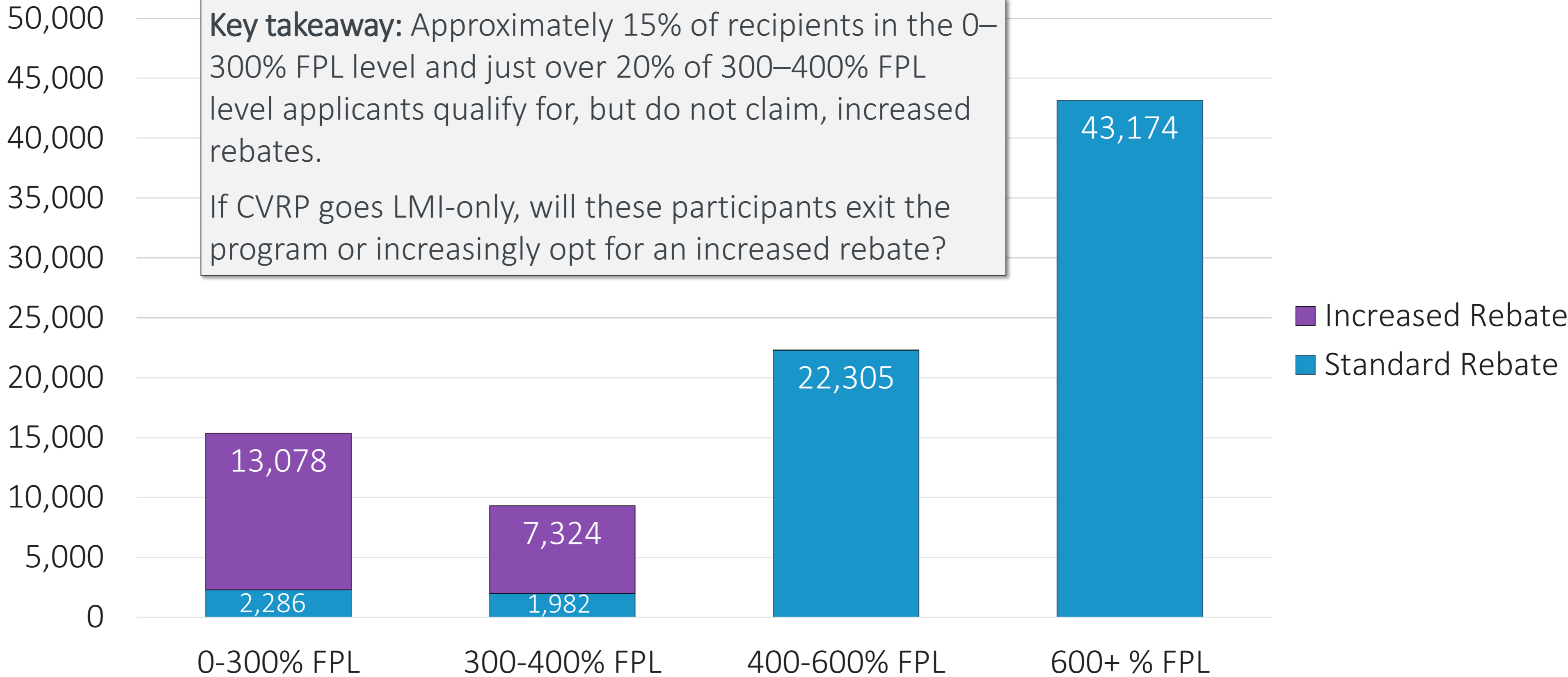
Rebates Issued By Key Income Levels



Key takeaways: About 75% of CVRP recipients have household incomes between 400% FPL and the income cap. In contrast, only 65% of the new car market who would qualify for CVRP's income criteria (i.e., excluding the highest income new car buyers) are in this income range.

Rebate Types Issued By Key Income Levels

Number of Rebates Issued

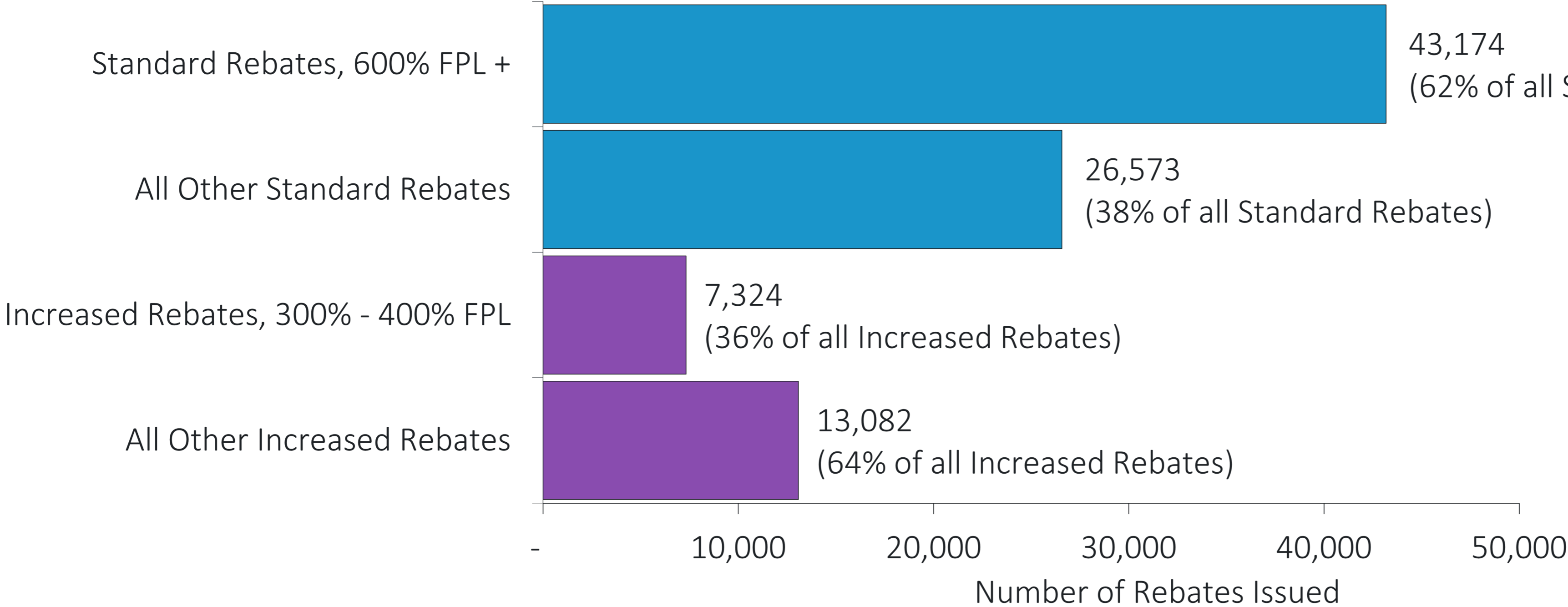


Key takeaway: Approximately 15% of recipients in the 0–300% FPL level and just over 20% of 300–400% FPL level applicants qualify for, but do not claim, increased rebates.
 If CVRP goes LMI-only, will these participants exit the program or increasingly opt for an increased rebate?



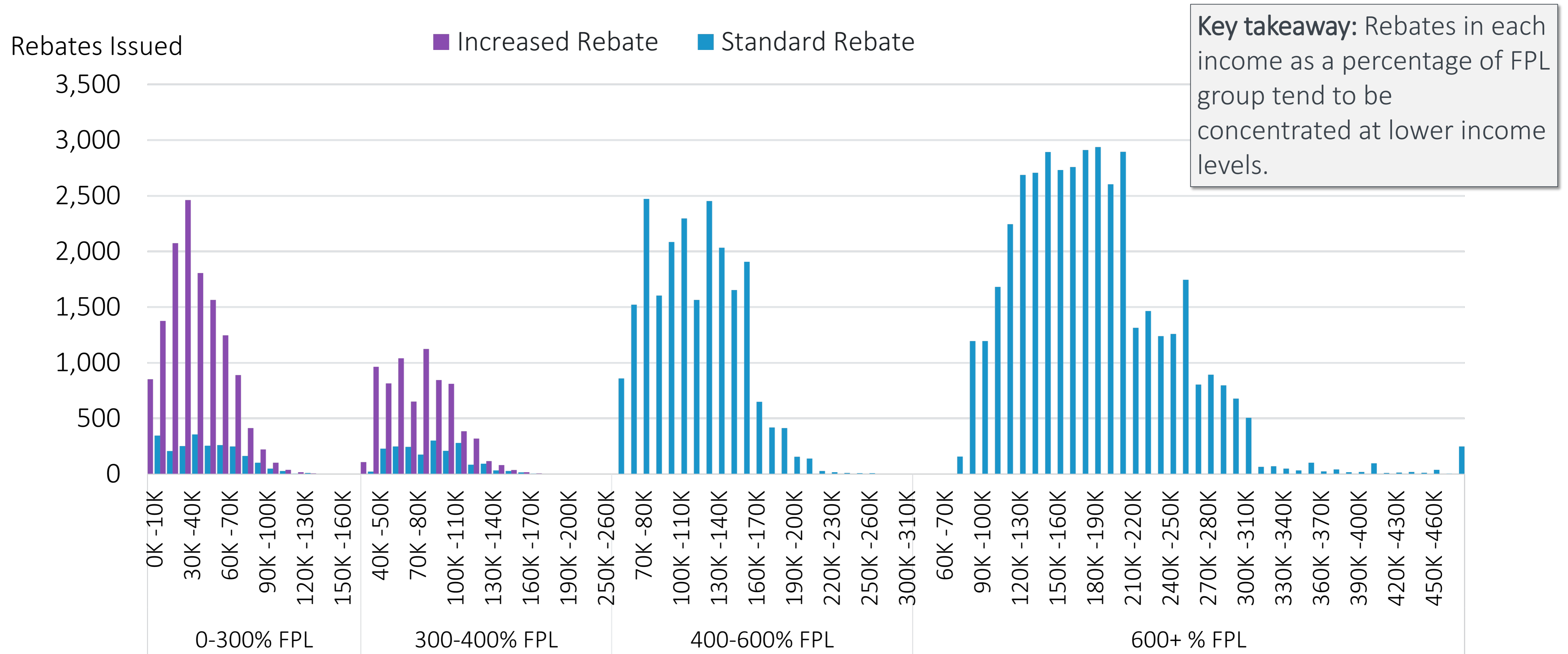
Applications received between Jan 1, 2021 and March 1, 2023
 Application Status = Application Approved, Check Sent; Application Type = Individual; n = 90,153
 The 300-400% FPL bar contains 437 applications (4.6%) submitted before the threshold for increased rebates was increased to 400% FPL.

Distribution of Rebates by Specific Income Levels



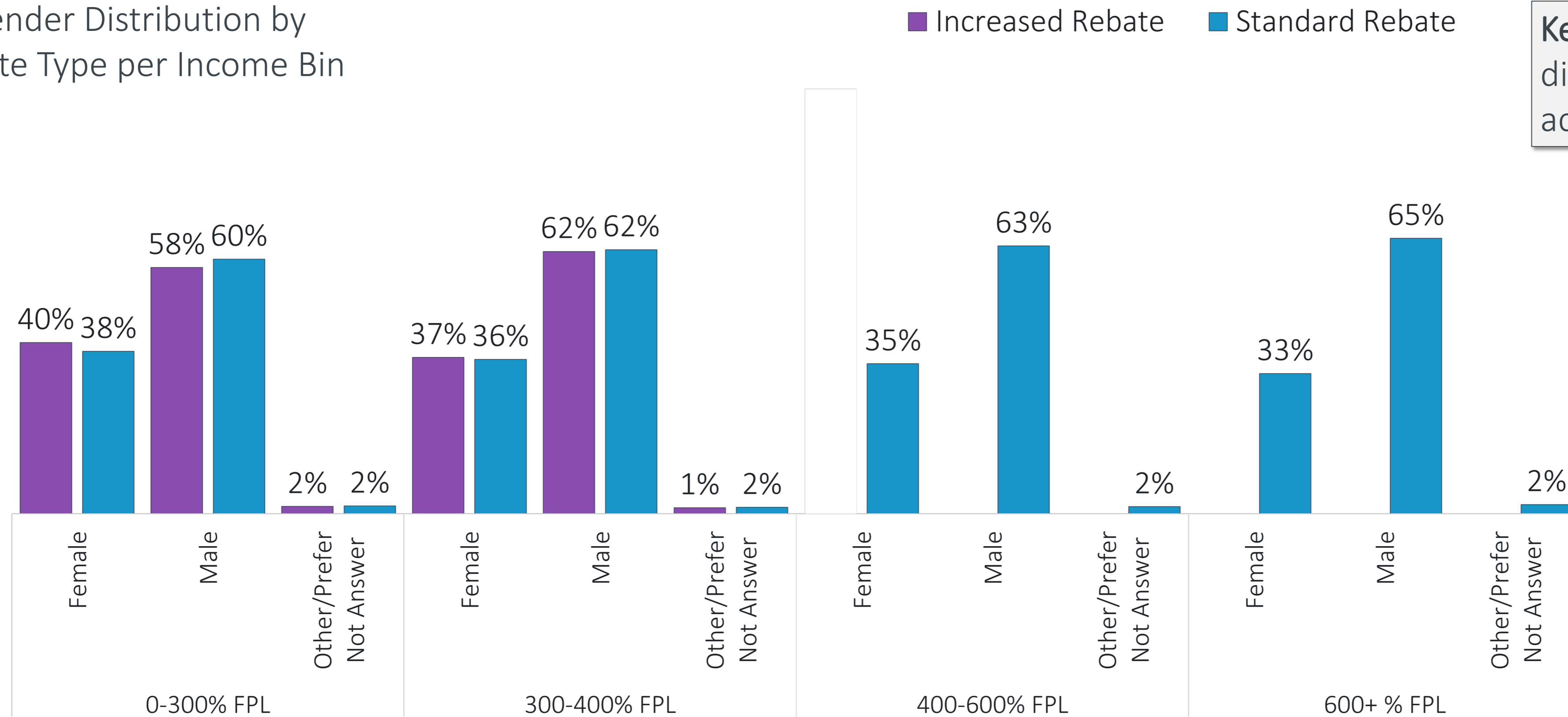
Key takeaways: 62% of standard rebate recipients have household incomes 600% FPL or greater. 36% of increased rebate recipients in this data window have household income between 300–400% FPL.

Rebate Distribution By Income



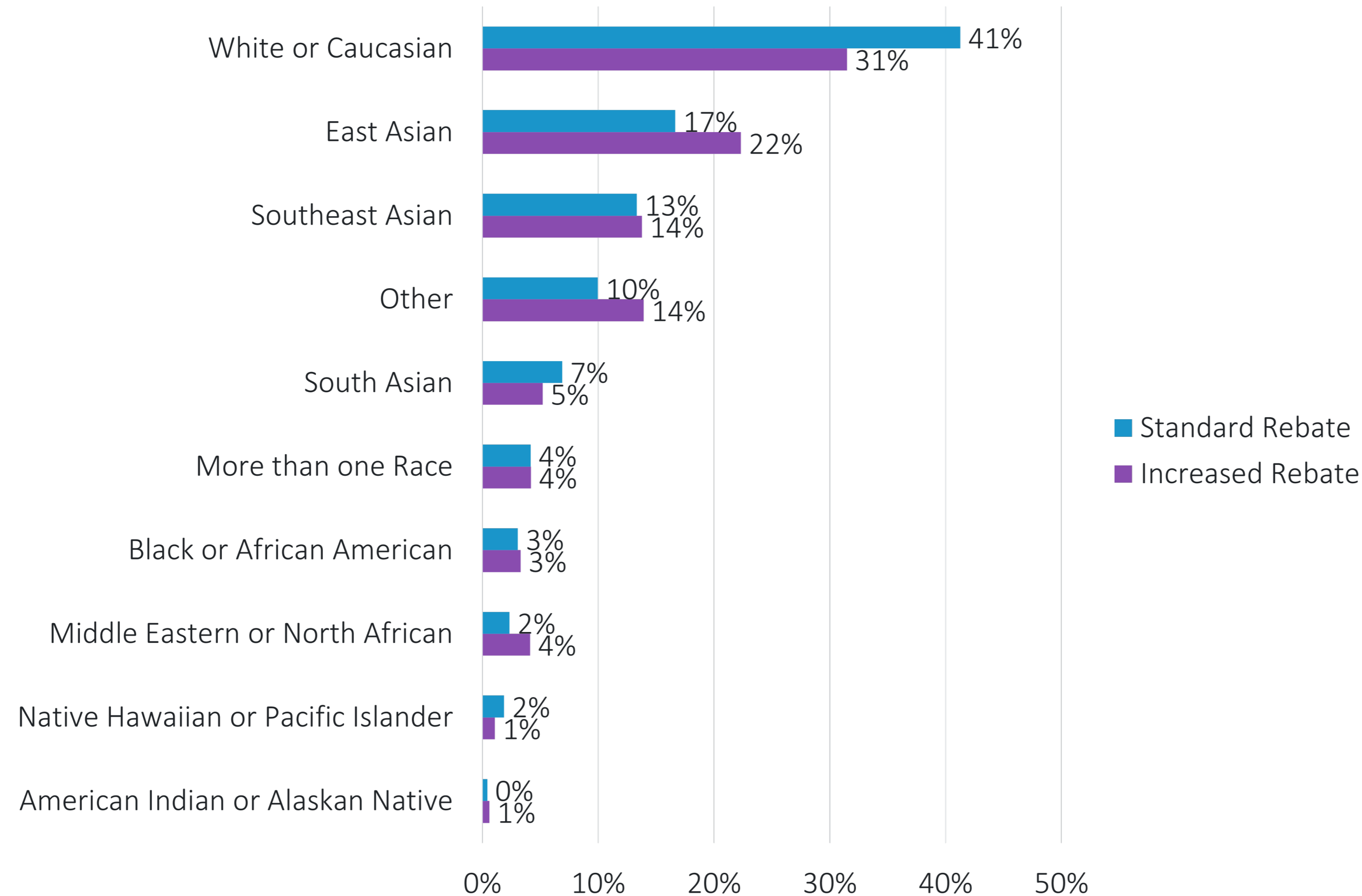
Distribution of Rebates by Gender and FPL

Gender Distribution by Rebate Type per Income Bin



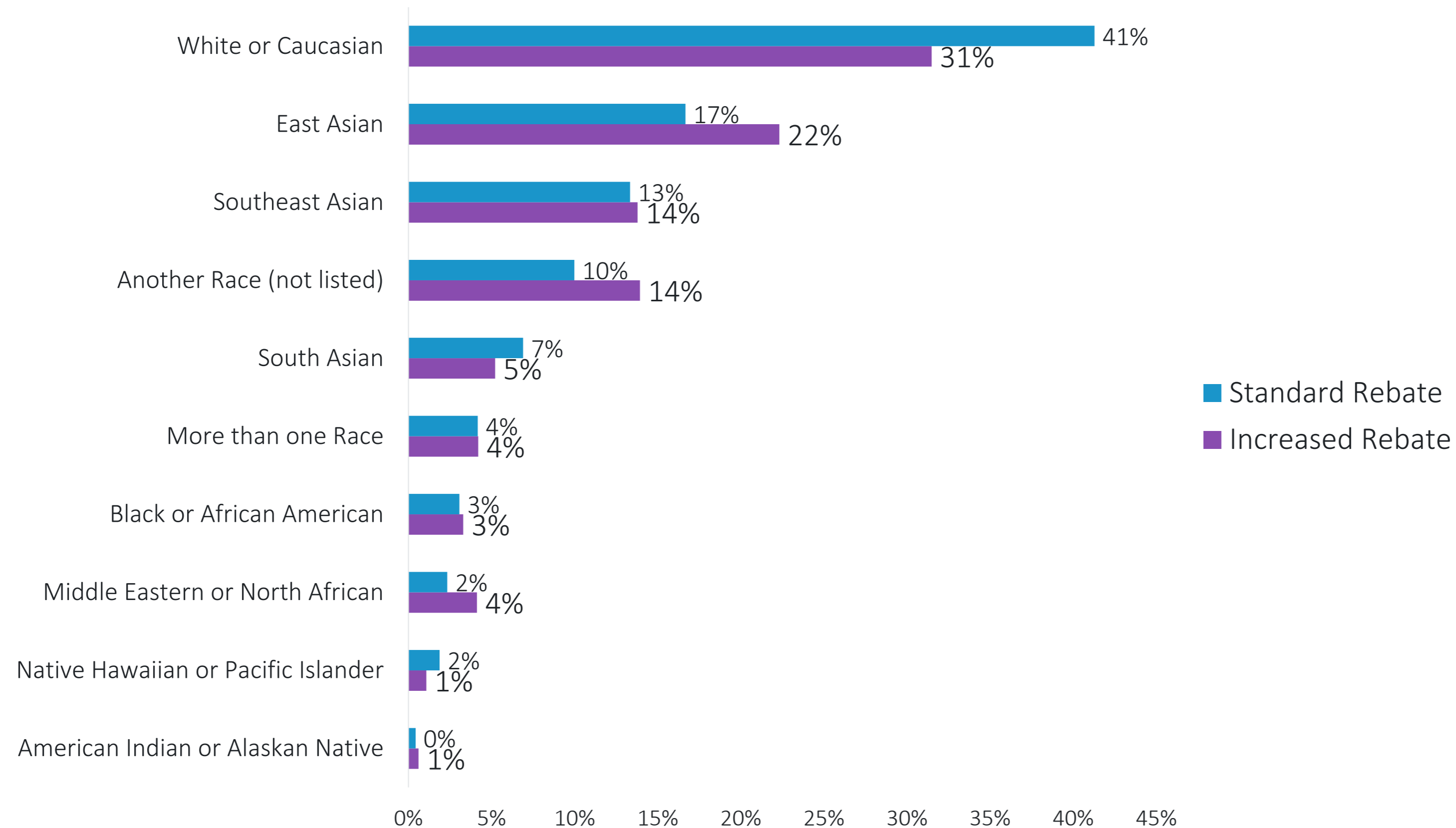
Key takeaway: Gender identity distribution looks similar across FPL income groups.

Distribution of Rebates By Race



Key takeaways:
 Respondents who identify as white or Caucasian received the largest number of rebates.
 Increased rebate recipients are more racially diverse than standard rebate recipients.

Distribution of Rebates By Race



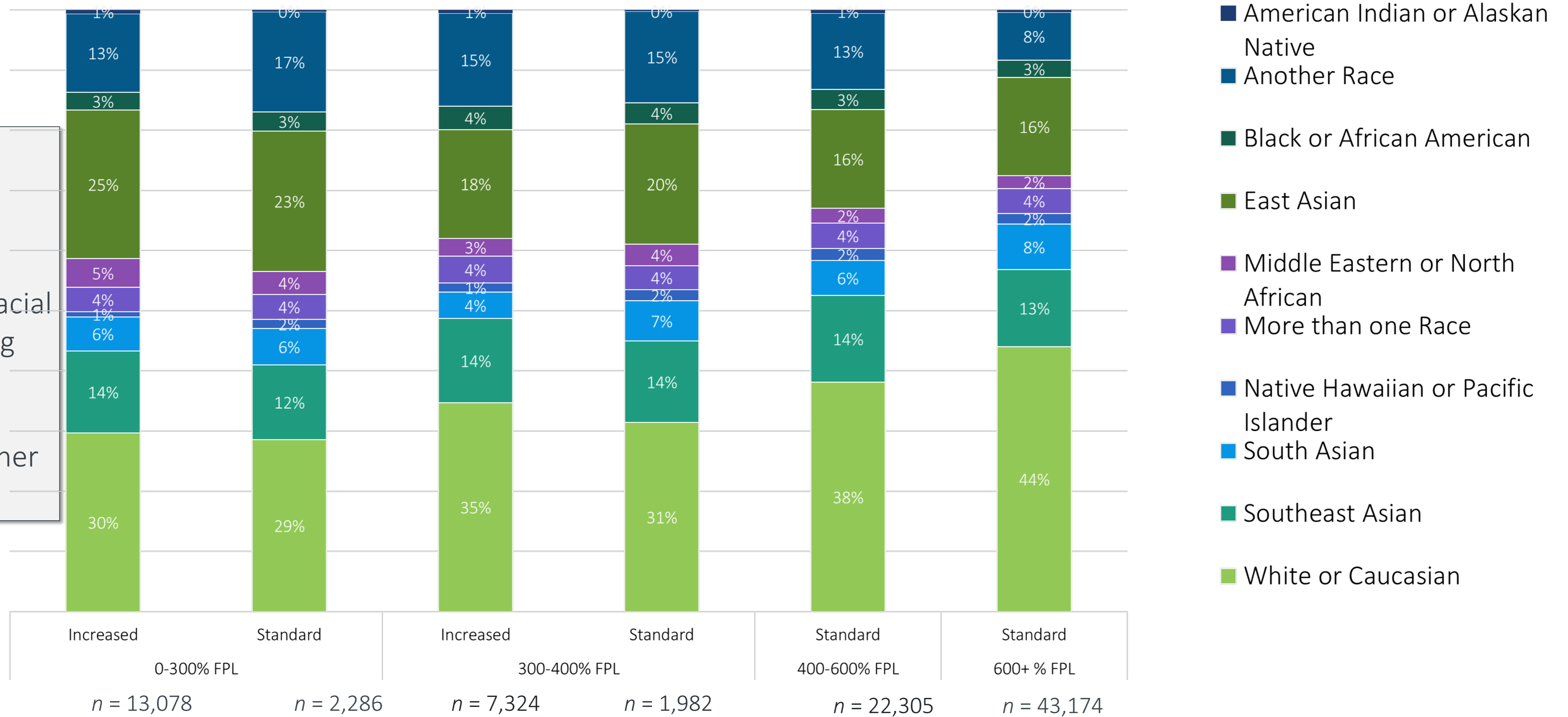
Key takeaways:

Respondents who identify as white or Caucasian received the largest number of rebates.

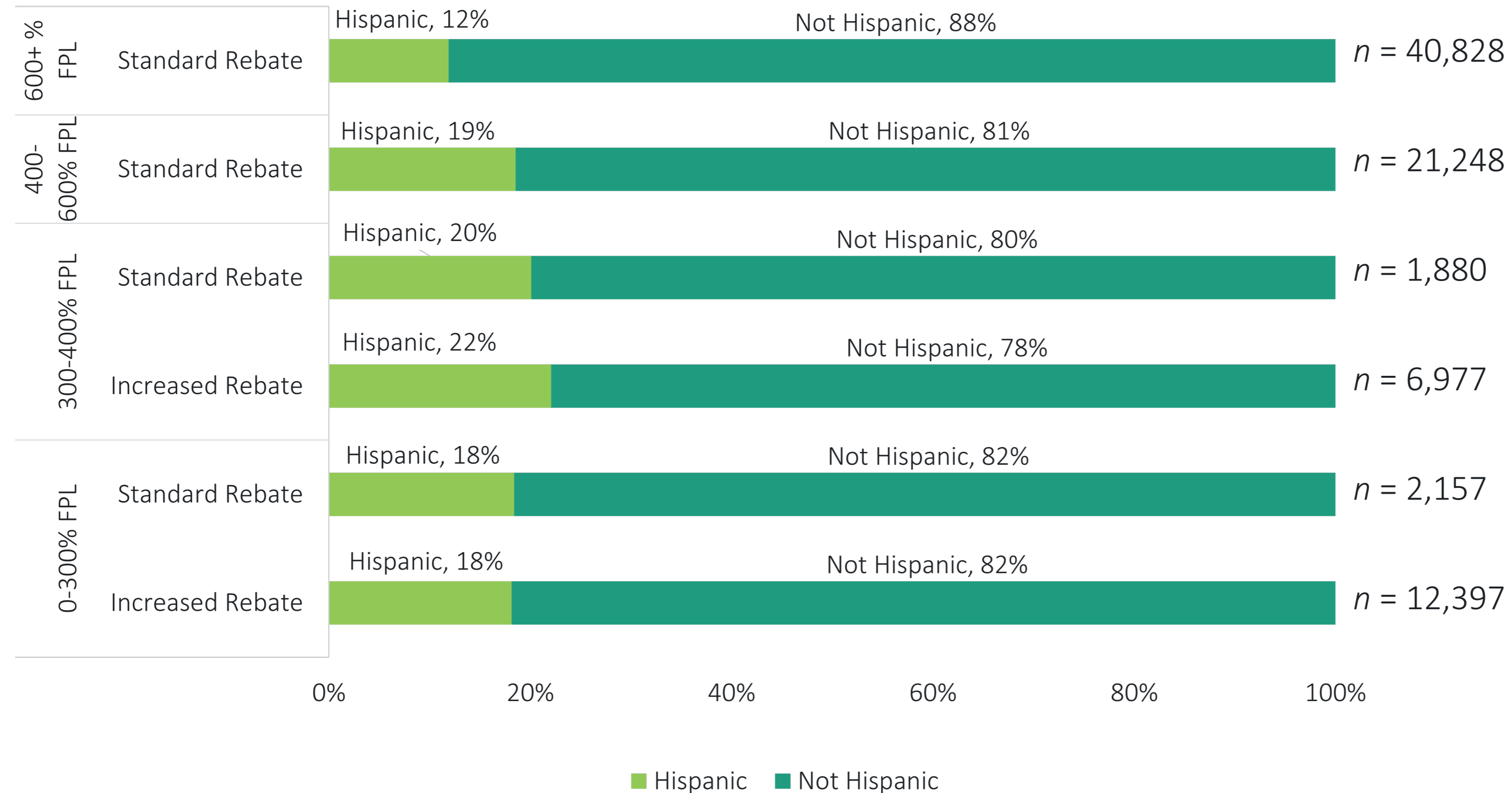
Increased rebate recipients are more racially diverse than standard rebate recipients.

Distribution of Rebates By Race

Key takeaway: Within rebate types, there appears to be slightly more racial diversity among participants at lower income levels than higher income levels.

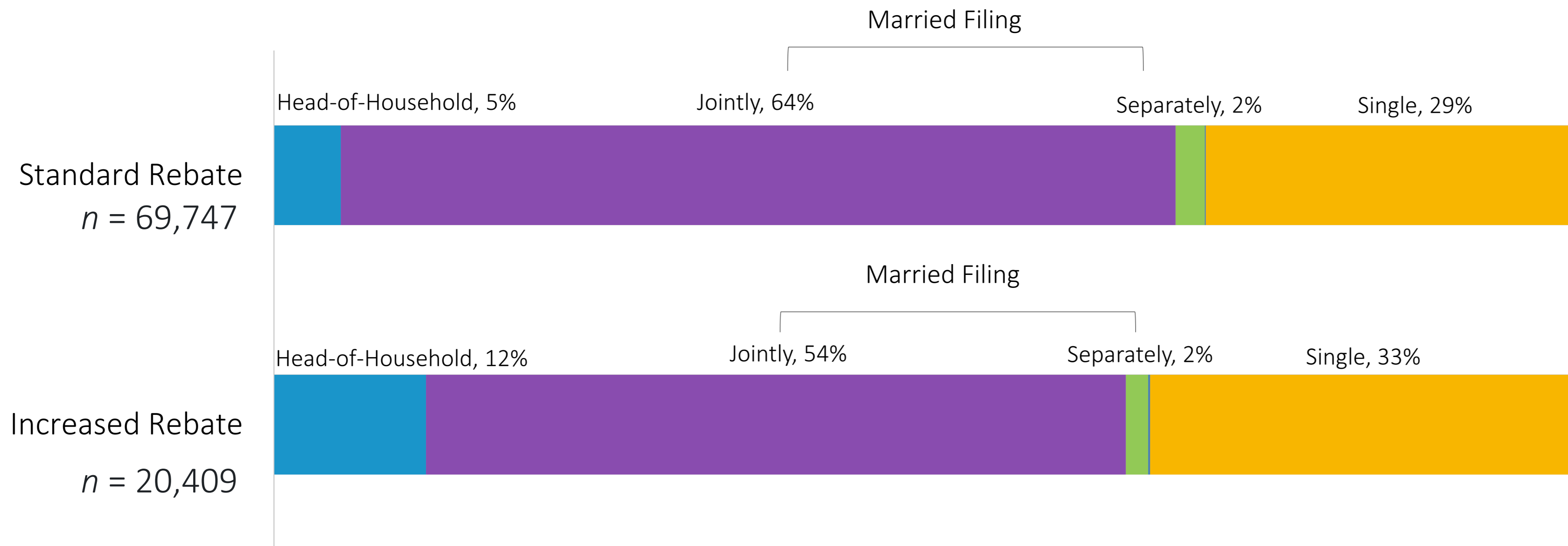


Distribution of Rebates By Ethnicity



Key takeaway:
Slightly lower participation from Hispanic EV adopters in 600+% FPL group than other groups.

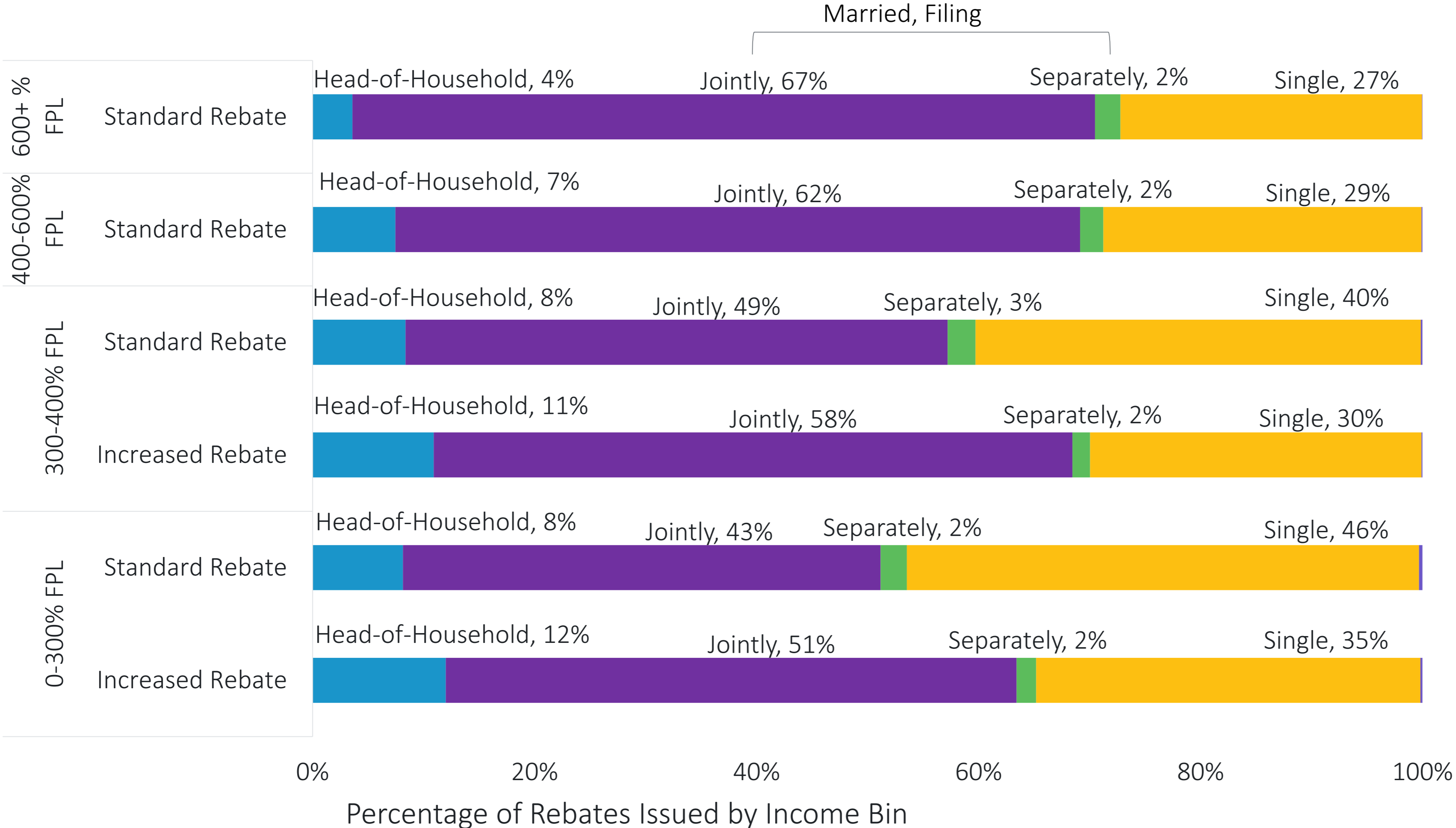
Distribution of Rebates by Tax Filing Status



Key takeaway:

Across both rebate types, most recipients are married and filing jointly, followed by single filers. There are slightly more single and head-of-household filers among Increased Rebate recipients.

Distribution of Rebates by Tax Filing Status and FPL



Key takeaways: Among increased rebate recipients, there are slightly higher rates of joint filers in the 300–400% FPL income range and slightly more single filers in the 0-300% FPL range.

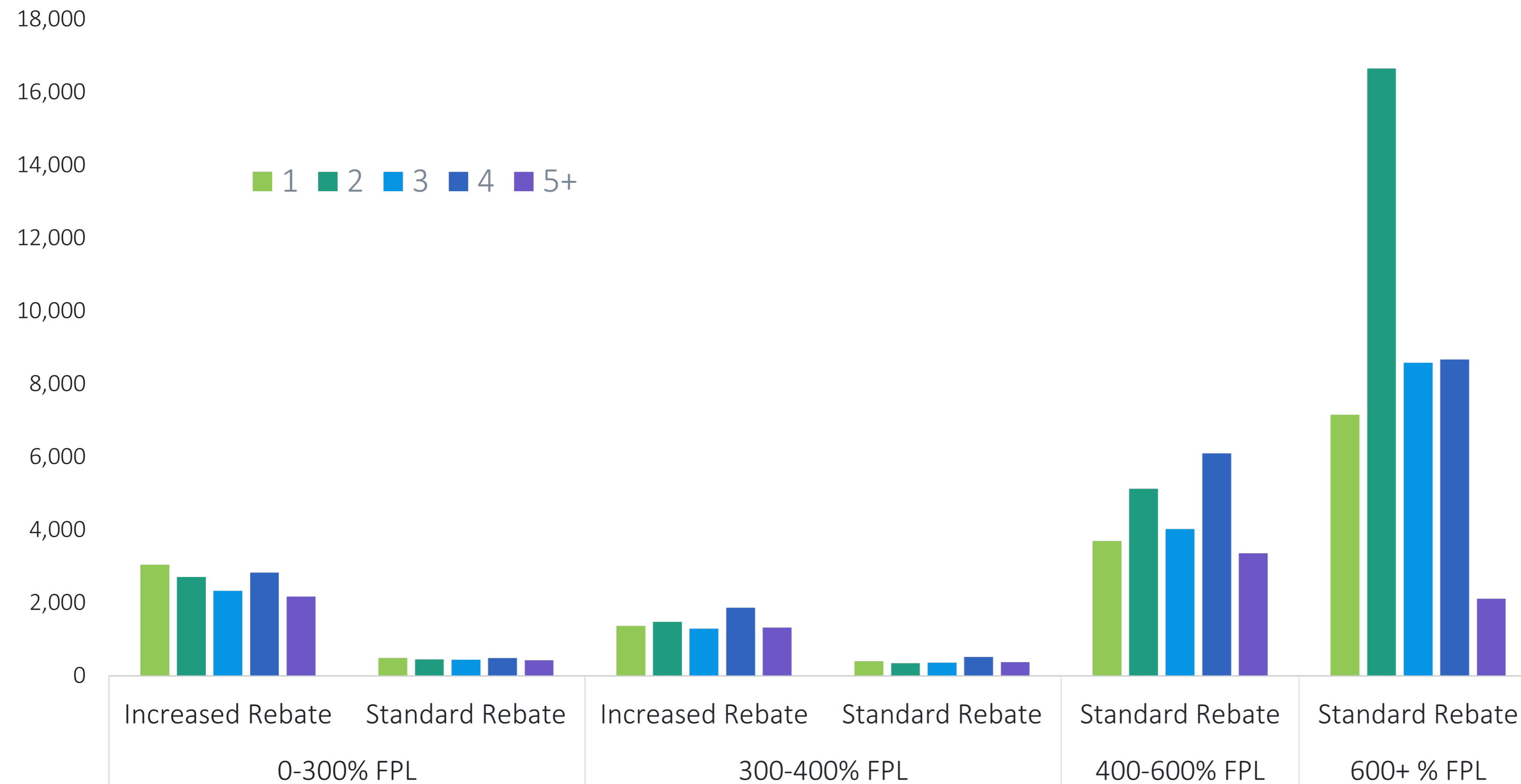
Among standard rebate recipients, there are slightly more joint filers in higher income households, and perhaps correspondingly fewer single and head of household filers.



Applications received between Jan 1, 2021 and March 1, 2023
 Application Status = Approved, Check Sent; Application Type = Individual; n = 90,149
 Qualified widow(er) with dependent child < 0.5% for each category

Distribution of Rebates by FPL and Household Size

Number of Rebates Issued



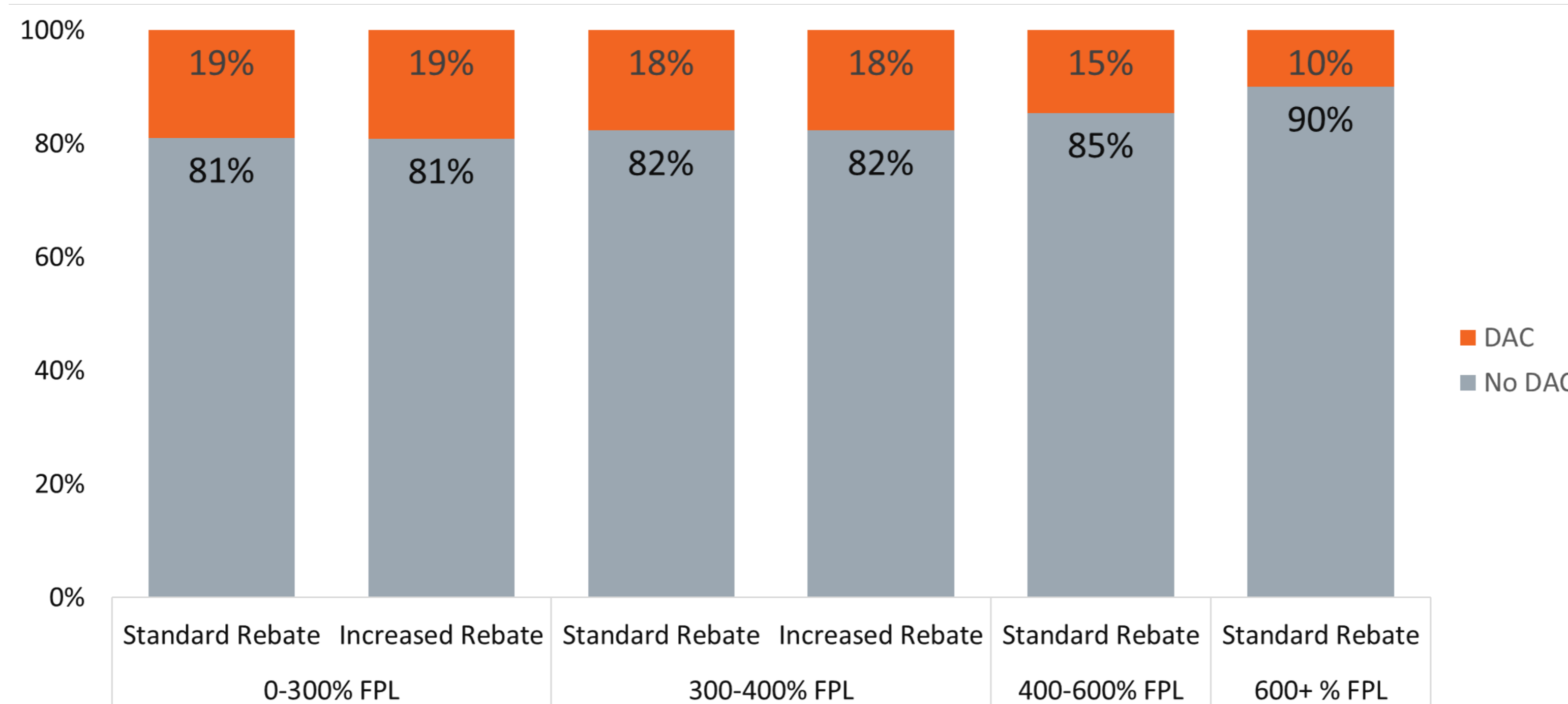
Key takeaway: Across both rebate types, household sizes are relatively equal, ranging from 1 to 4 persons for recipients with income under 600% FPL. However, at the highest income level, most recipients live in 2-person households.



Applications received between Jan 1, 2021 and March 1, 2023
 Application Status = Approved, Check Sent; Application Type = Individual; n = 90,149

Rebate Distributions in DACs by FPL

Percentage of Rebates Issued

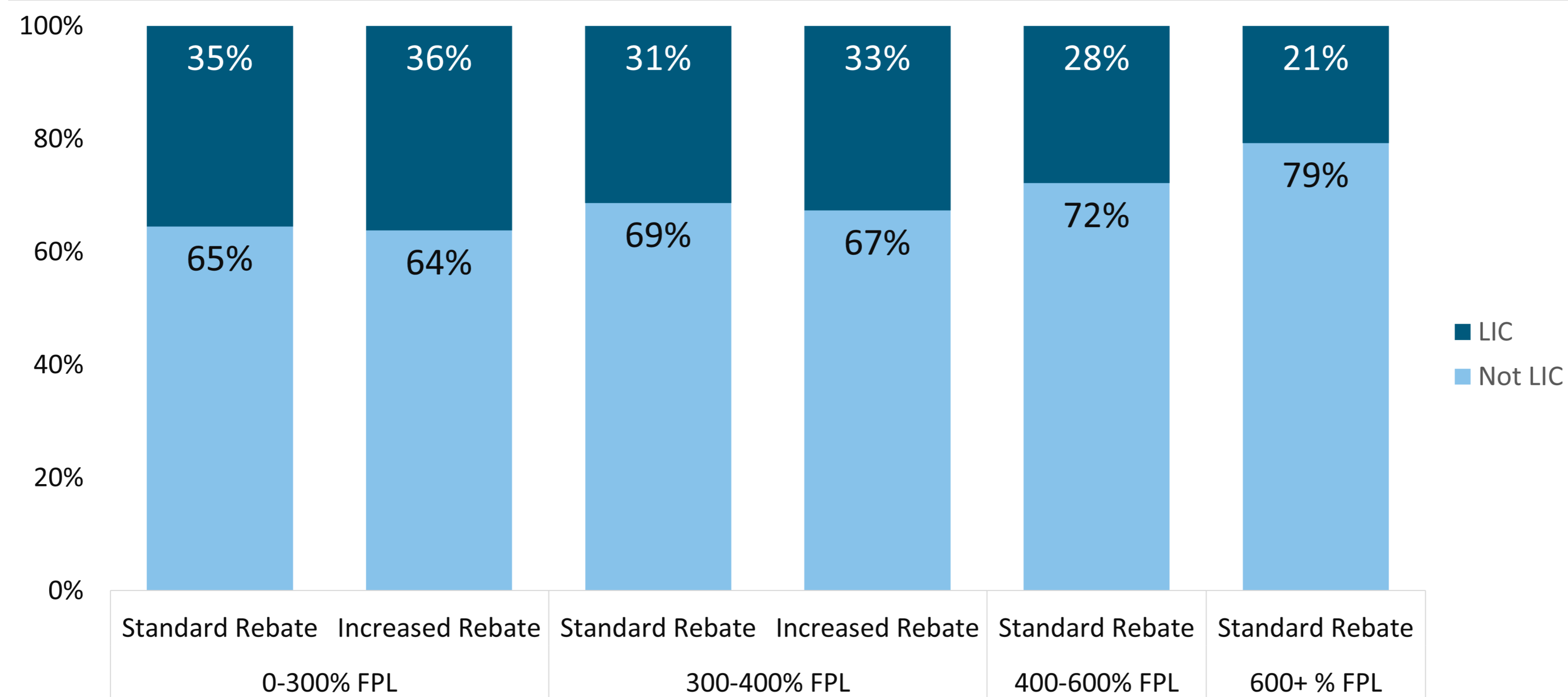


Key takeaways: No major differences in increased rebate participation by DAC status across income groups.

As income increases, the percentage of rebate consumers living in DACs decreases.

Rebate Distributions in LICs by FPL

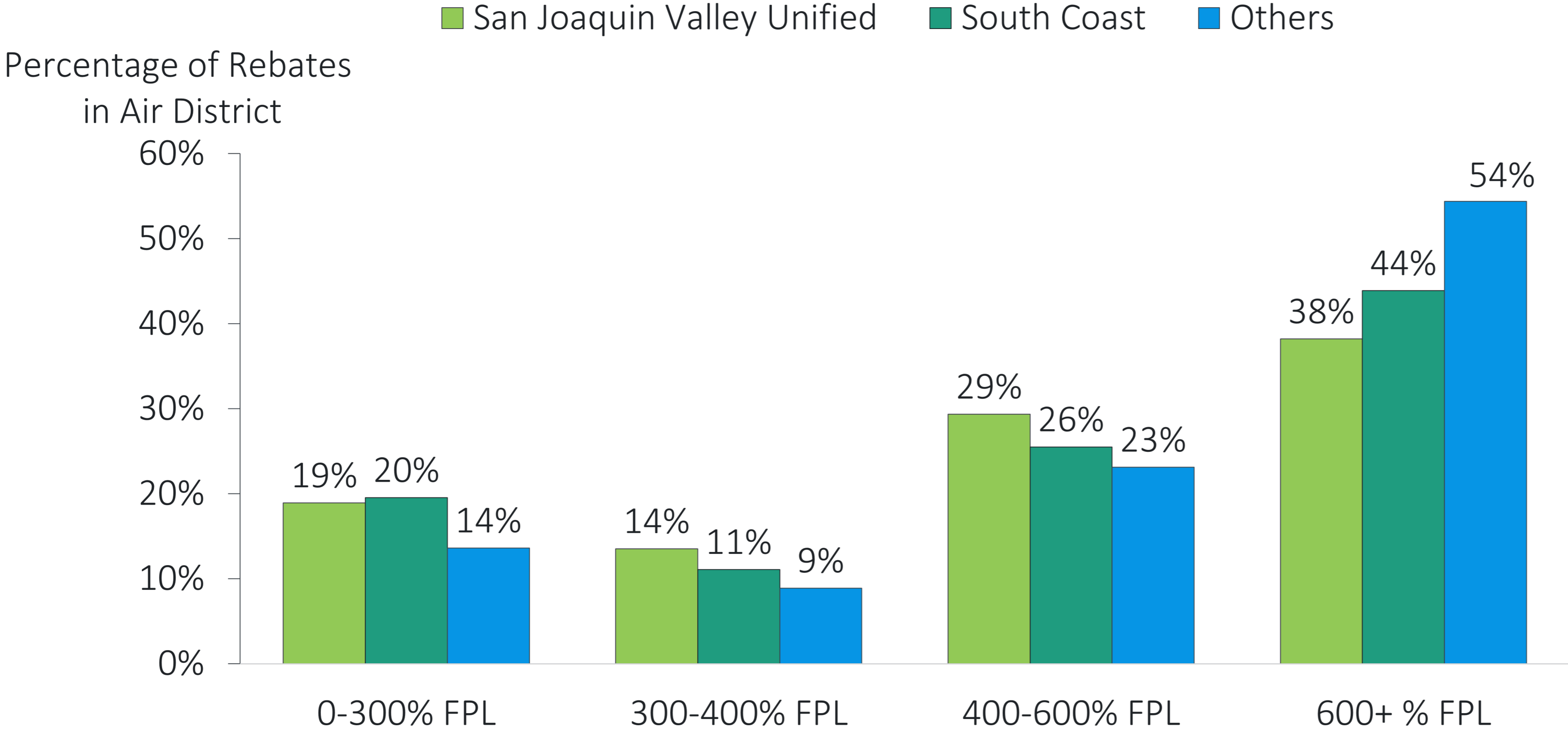
Percentage of Rebates Issued



Key takeaways: No major differences in increased rebate participation by LIC status across income groups.

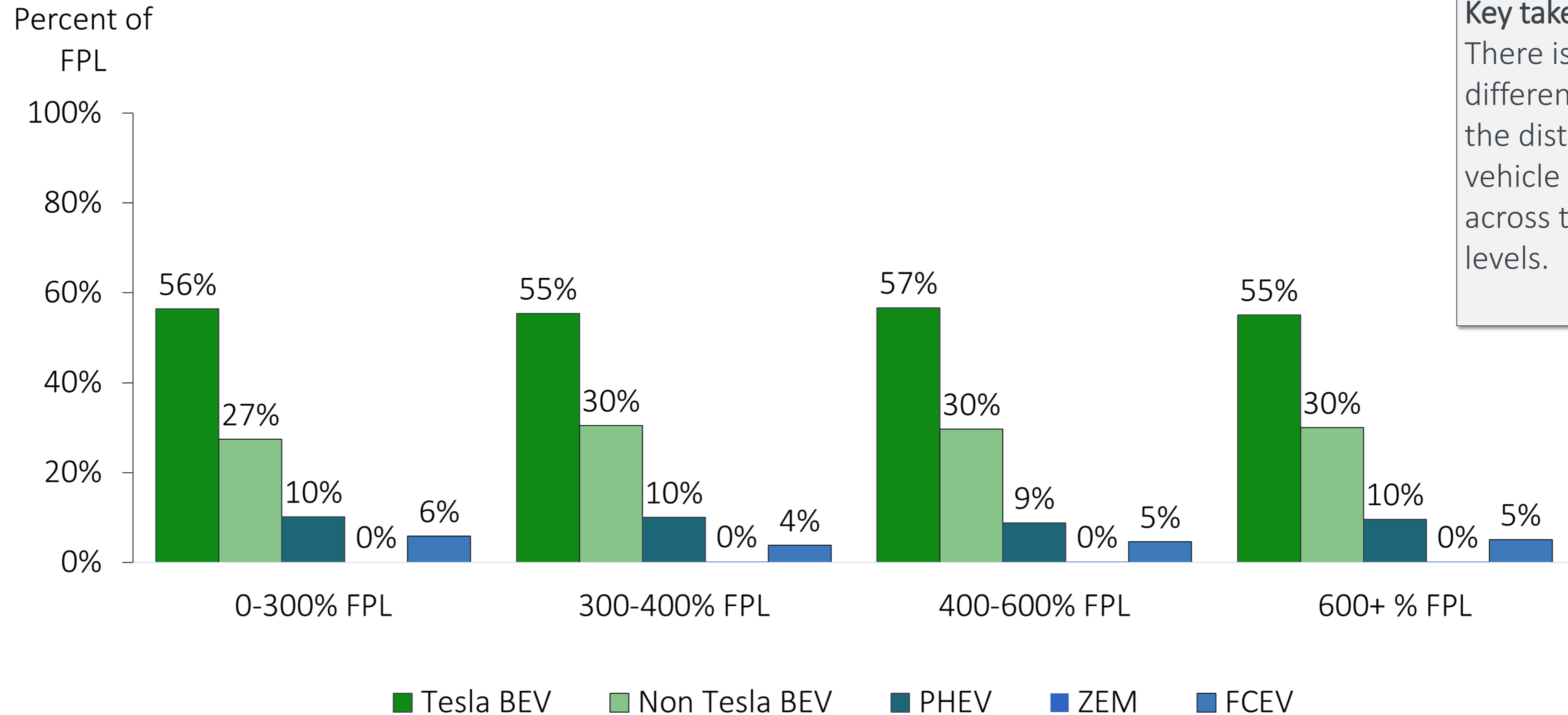
Although similar in pattern to the DAC distributions (i.e., higher income is equated with lower percentages of buyers living in LICs), the relative percentages of buyers living in Low Income Communities is larger than the analogous percentages living in DACs across the income spectrum.

Rebate Distribution by Selected Air Districts



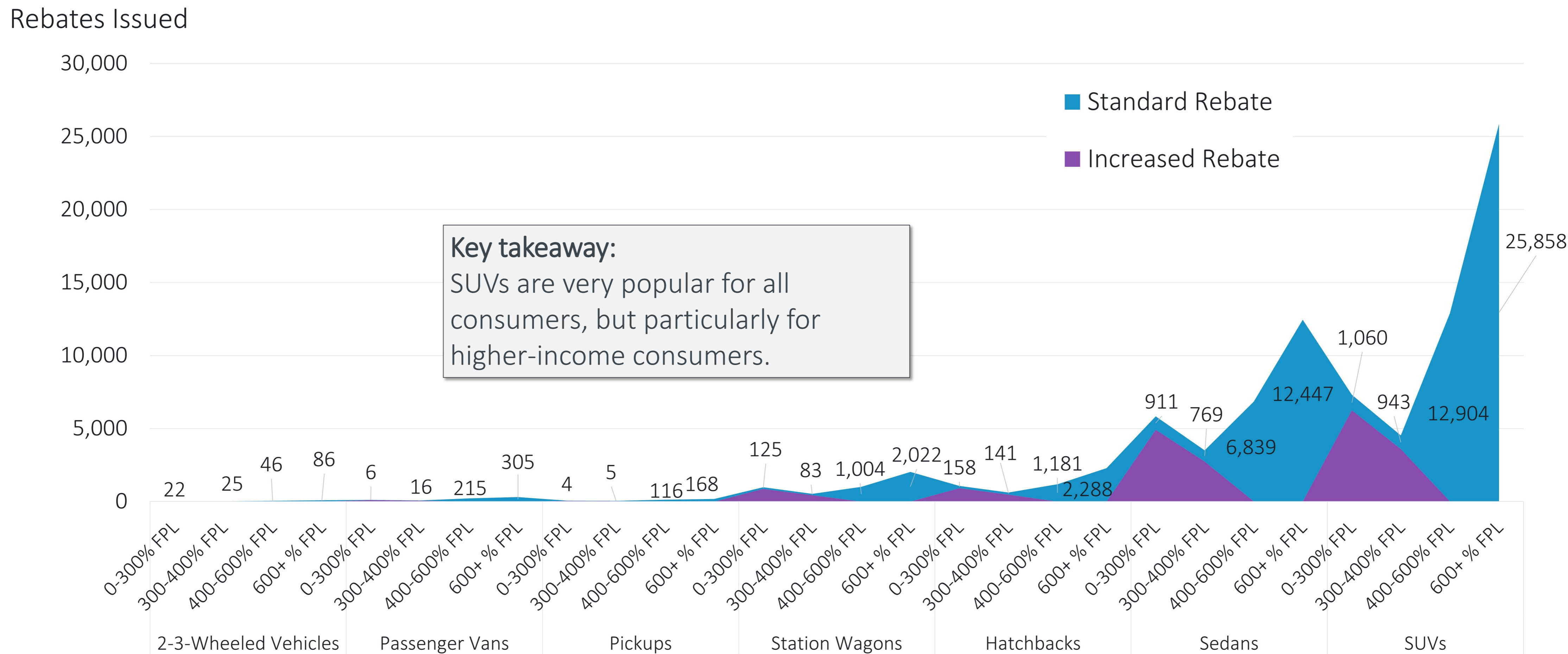
Key takeaways:
A higher percentage of participants living in the South Coast and San Joaquin Valley have household income less than 600%, 400% and 300% FPL.

Rebated Vehicle Categories by FPL

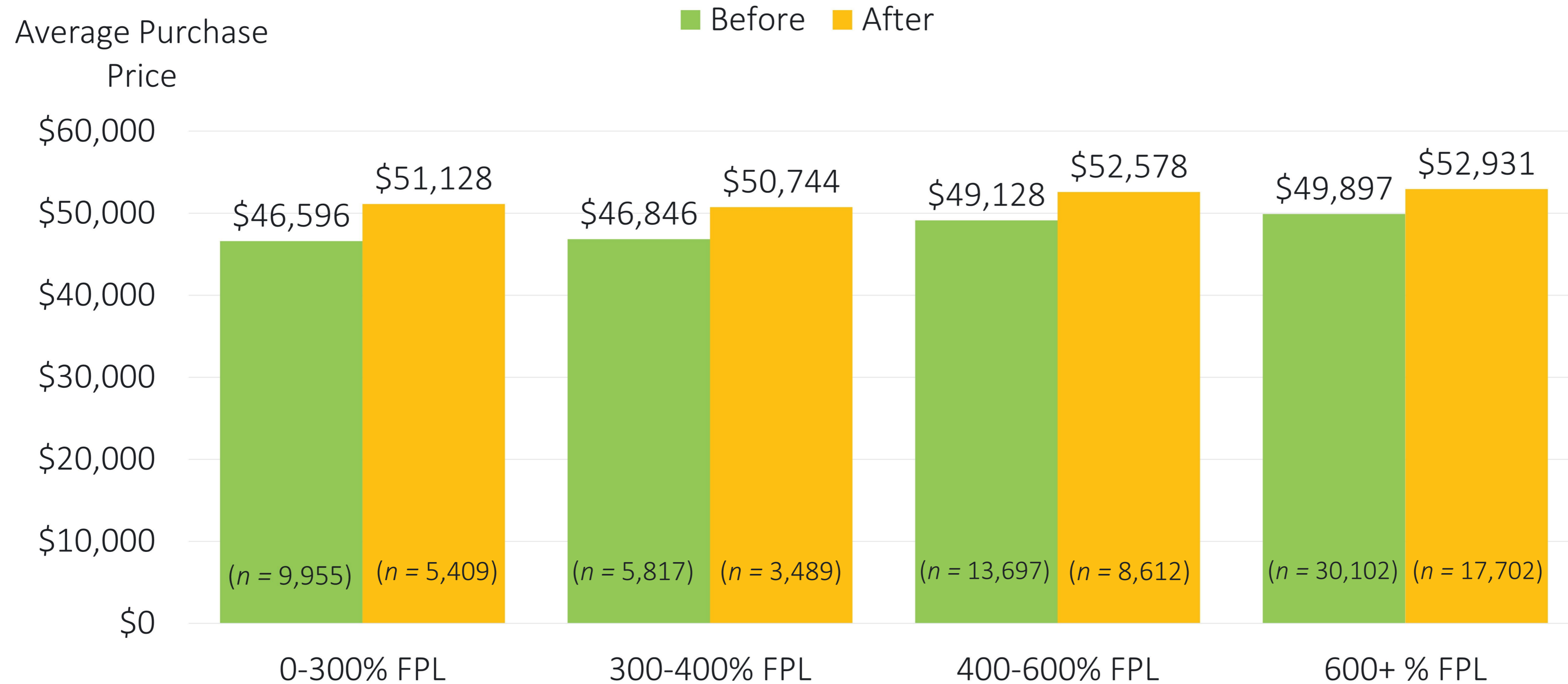


Key takeaway:
There is little difference between the distributions of vehicle categories across the four income levels.

Rebated Vehicle Body Styles by FPL and Rebate Levels



Average Price Paid for Rebated Vehicles Before and After Feb 24, 2022*



Key takeaway:
 After the February 24, 2022 MSRP changes, average vehicle purchase prices increased across the income spectrum. However, as vehicle prices were already rising prior to that point, this may reflect market changes independent from the CVRP.



*As of February 24, 2022, eligible Large Vehicles were limited to base MSRP of \$60,000 or less; eligible Cars limited to base MSRP of \$45,000 or less.
 Applications received between Jan 1, 2021 and Feb 23, 2022 (n = 59,571)
 Applications received between Feb 24, 2022 and March 3, 2023 (n = 30,582)
 Application Status = Approved, Check Sent; Application Type = Individual

