

# **Customer Attrition Patterns:**

#### Who Drops Out from SCE's CARE Program?



### Southern California Edison Representative



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## MODEL VARIABLES 1 of 2

VARIABLE	DEFINITION	CATEGORIES	N	%
C		Closed Fail	69,937	79.1%
INCOME ELIGIBILITY VERIFICATION 2014 RESULT	Outcome of Income Eligibility Verification as of Observation/Report Date of April 3, 2015	Closed Pass or Still Open	18,534	20.9%
as of APRIL 3, 2015		Closed Pass	17,662	20.0%
		Still Open	872	1.0%
	Participation in Public Assistance	Categorical Program Participant	46,538	52.6%
CATEGORICAL PROGRAM PARTICIPATION PARTICIPATION PARTICIPATION Program (LIHEAP); Women, Infants, and Children (WIC); etc.		Non-Participant	41,933	47.4%
	Energy Usage as Percent of Baseline	Traditional (DSRS)/Non-High Usage	51,561	58.3%
LEVEL OF USAGE		High Usage	36,910	41.7%
		High-Low (400% to <600% of Baseline)	29,674	33.5%
		High-High (At least 600% of Baseline)	7,236	8.2%
INCOME LEVEL of	Residence in County ZIP5 with Proportion of CARE Eligible Households	eholds		57.1%
RESIDENTIAL AREA (County ZIP5)(200% of Federal Poverty Line) Less Than Median Level for CARE Population		Residing in "Low Income" Area	37,963	42.9%
HISTORY OF ELIGIBILITY	Previous Experience of Failing Eligibility		4,776	5.4%
VERIFICATION	Verification	No previous experience of failing eligibility verification	83,695	94.6%



#### MODEL VARIABLES 2 of 2

VARIABLE	DEFINITION	CATEGORIES		%
		Lower Middle Class, Downscale, or Low Income Prizm Segments		30.6%
PRIZM INCOME GROUP	Prizm Segment Grouped by Income Level	Lower Middle Class (50 Kid Country USA, 54 Multi-Culti Mosaic, 59 Urban Elders, 60 Park Bench Seniors, 63 Family Thrifts, 65 Big City Blues, 66 Low-Rise Living)		22.1%
		Downscale (44 New Beginnings, 46 Old Glories, 49 American Classics, 52 Suburban Pioneers, 53 Mobility Blues, 55 Golden Ponds, 56 Crossroads Villagers, 57 Old Milltowns, 58 Back Country Folks, 61 City Roots, 62 Hometown Retired)	6 1 6 0	7.0%
		Low Income (47 City Startups, 64 Bedrock America)	1,375	1.6%
		Other Prizm Segments	61,413	69.4%
	Mode of Entry into CARE Program	CARE Application	9,873	11.2%
		External Data (i.e. referrals from gas company)		5.5%
		Internet Enrollment	4,822 9,176	10.4%
ENROLLMENT			37,917	42.9%
CHANNEL		Special Project (e.g. Call Centers, Targeted Acquisition Calls, Internal Data Sharing like ESA, LIHEAP, EAF Grantees, etc.)	9,588	10.8%
		Other Channels of Enrollment/Unknown	17,095	19.3%
HOUSEHOLD SIZE	Household Size	One to Two	21,181	23.9%
		Three to Five	39,321	44.4%
		At Least Six Unknown Household Size	15,733 12,236	17.8% 13.8%

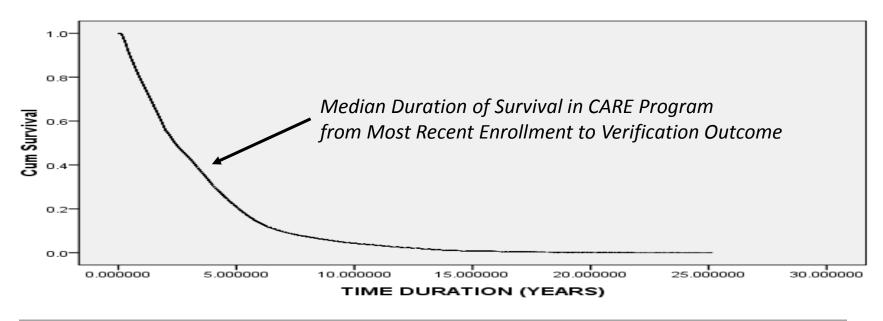
#### STATISTICAL FINDINGS 1 of 2

CHARACTERISTICS   % FAILED (n=69,937)   % PASS or OPEN (n=18,354)   W to see by the	CHARACTERISTICS			E (FISHER'S E OBABILITY)	MULTIVARIATE (COX REGRESSION/PROPORTIONAL HAZARDS/SURVIVAL ANALYSIS)		
Categorical Program Participant   51.6   56.5   **   Decrease   **     EARE Application   10.6   13.3   ***   Increase   ***     Enrollment Channel   External Data   5.7   4.4   ***   Increase   ***     Internet   10.8   8.9   ***   Increase   ***     Recertification/Verification   41.7   47.2   ***   Decrease   ***     Other Enrollment Channels   19.4   19.0   n.s.   Reference Category     Residence in "High" or Unknown Income County ZIP5   56.1   60.7   ***   Increase   **     Previous Failure at Income Eligibility Verification   6.0   3.0   ***   Increase   **     Household Size   At Least Six   19.9   39.3   ***   Decrease   **     Usage Level   Non-High Usage   49.3   13.1   **   N.A.     High-Low   39.4   11.3   **   N.A.   Increase   **     Usage Level   High-Low   39.				or OPEN	SIGNIFICANCE (** significant at .01, n.s. not significant)	IMPACT on LIKELIHOOD of FAILING ELIGIBILITY	SIGNIFICANCE (** significant at .01, n.s. not significant)
Enrollment Channel   External Data   5.7   4.4   **   Increase   ***     Intermet   10.8   8.9   **   Increase   ***     Recertification/Verification   41.7   47.2   **   Decrease   ***     Special Project   11.8   7.2   **   Increase   ***     Other Enrollment Channels   19.4   19.0   n.s.   Reference Category     Previous Failure at Income Eligibility Verification   6.0   3.0   **   Increase   ***     Household Size   One to Two   19.9   39.3   **   Decrease   ***     Household Size   Three to Five   45.9   39.1   **   Decrease   ***     Usage Level   One to Two   19.9   9.6   **   Decrease   ***     High-Low   39.3   13.1   **   N.A.   **     Usage Level   High-Low   39.4   11.3   **   Increase   **     High-Low   39.4   11.3	Categorical Program Participa					Decrease	**
Internet   10.8   8.9   **   Increase   **     Recertification/Verification   41.7   47.2   **   Decrease   **     Special Project   11.8   7.2   **   Increase   **     Other Enrollment Channels   19.4   19.0   n.s.   Reference Category     Residence in "High" or Unknown Income County ZIP5   56.1   60.7   **   Increase   **     Previous Failure at Income Eligibility Verification   6.0   3.0   **   Increase   **     Household Size   One to Two   19.9   39.3   **   Decrease   **     Household Size   14.3   12.0   **   Reference Category     Unknown Household Size   14.3   12.0   **   Reference Category     Non-High Usage   50.7   86.9   **   Reference Category     Inknown Household Size   14.3   12.0   **   Reference Category     Wan-High Usage   49.3   13.1   **   N.A.     Usage Level   Hi						Increase	
Enrollment Channel   Recertification/Verification   41.7   47.2   **   Decrease   **     Special Project   11.8   7.2   **   Increase   **     Other Enrollment Channels   19.4   19.0   n.s.   Reference Category     Residence in "High" or Unknown Income County ZIP5   56.1   60.7   **   Increase   **     Previous Failure at Income Eligibility Verification   6.0   3.0   **   Increase   **     Mousehold Size   One to Two   19.9   39.3   **   Decrease   **     Household Size   Three to Five   45.9   39.1   **   Decrease   **     Musehold Size   14.3   12.0   **   Reference Category   **     Musehold Size   H4.3   12.0   **   Reference Category   **     Usage Level   High-Low   39.4   11.3   **   N.A.     High-High   9.9   1.9   **   Increase   **     High-High   9.9   1.9			-				
Recentification/Verification   41.7   47.2   **   Decrease   **     Special Project   11.8   7.2   **   Increase   **     Other Enrollment Channels   19.4   19.0   n.s.   Reference Category     Residence in "High" or Unknown Income County ZIP5   56.1   60.7   **   Increase   **     Previous Failure at Income Eligibility Verification   6.0   3.0   **   Increase   **     Household Size   One to Two   19.9   39.3   **   Decrease   **     Household Size   Increase   19.9   39.1   **   Decrease   **     Household Size   14.3   12.0   **   Decrease   **     Unknown Household Size   14.3   12.0   **   Reference Category     Usage Level   Non-High Usage   50.7   86.9   **   Reference Category     High-Low   39.4   11.3   **   N.A.   Increase   **     Lower Mid, Downscale, & Low   29.5   34.8	Enrollment Channel						
Special Project   11.5   1.7.2   Indease     Other Enrollment Channels   19.4   19.0   n.s.   Reference Category     Residence in "High" or Unknown Income County ZIP5   56.1   60.7   **   Increase   **     Previous Failure at Income Eligibility Verification   6.0   3.0   **   Increase   **     Household Size   One to Two   19.9   39.3   **   Decrease   **     Household Size   At Least Six   19.9   9.6   **   Decrease   **     Usage Level   Non-High Usage   50.7   86.9   **   Reference Category     High Usage   49.3   13.1   **   N.A.   **     High Usage   49.3   13.1   **   Increase   **     High Usage   49.3   13.1   **   N.A.   **     Lower Mid, Downscale, & Low   29.5   34.8   **   N.A.   **     Prizm Income Group   Downscale   6.6   8.3   **   Decrease   **							
Residence in "High" or Unknown Income County ZIP5   56.1   60.7   **   Increase   **     Previous Failure at Income Eligibility Verification   6.0   3.0   **   Increase   **     Household Size   One to Two   19.9   39.3   **   Decrease   **     Three to Five   45.9   39.1   **   Decrease   **     At Least Six   19.9   9.6   **   Decrease   **     Unknown Household Size   14.3   12.0   **   Reference Category     Non-High Usage   50.7   86.9   **   Reference Category     High Usage   49.3   13.1   **   N.A.     High-Low   39.4   11.3   **   Increase   **     High-Low   39.4   11.3   **   N.A.   **     Lower Mid, Downscale, & Low   29.5   34.8   **   N.A.     Income   29.5   34.8   **   N.A.     Lower Middle Class   21.3   25.1   **					**		
Residence in High of Olikhown micoline County 21PS   36.1   60.7   Increase   **     Previous Failure at Income Eligibility Verification   6.0   3.0   **   Increase   **     Household Size   One to Two   19.9   39.3   **   Decrease   **     Household Size   Three to Five   45.9   39.1   **   Decrease   **     At Least Six   19.9   9.6   **   Decrease   **     Mon-High Usage   50.7   86.9   **   Reference Category     High Usage   49.3   13.1   **   N.A.     High Usage   49.3   13.1   **   N.A.     High Usage   49.3   13.1   **   N.A.     High-Low   39.4   11.3   **   N.A.     Mone-Middle Class   29.5   34.8   **   N.A.     Increase   1.6   8.3   **   Decrease   n.s.     Prizm Income Group   Lower Middle Class   21.3   25.1   ** <td< td=""><td></td><td></td><td>-</td><td></td><td>-</td><td colspan="2">, , , , , , , , , , , , , , , , , , ,</td></td<>			-		-	, , , , , , , , , , , , , , , , , , ,	
Household Size   One to Two   19.9   39.3   ***   Decrease   ***     Household Size   Three to Five   45.9   39.1   ***   Decrease   ***     At Least Six   19.9   9.6   ***   Decrease   ***     Unknown Household Size   14.3   12.0   **   Reference Category     Mon-High Usage   50.7   86.9   **   Reference Category     High Usage   49.3   13.1   **   N.A.     High Usage   49.3   13.1   **   N.A.     High Usage   49.3   13.1   **   Increase   **     High Usage   49.3   13.1   **   N.A.   **     High Low   39.4   11.3   **   Increase   **     More Mid, Downscale, & Low   29.5   34.8   **   N.A.     Income   Downscale   6.6   8.3   **   Decrease   **     Lower Middle Class   21.3   25.1   **   Decrease </td <td>v</td> <td>, ,</td> <td></td> <td></td> <td></td> <td>Increase</td> <td></td>	v	, ,				Increase	
Household Size   Three to Five   45.9   39.1   **   Decrease   **     At Least Six   19.9   9.6   **   Decrease   **     Unknown Household Size   14.3   12.0   **   Reference Category     Mon-High Usage   50.7   86.9   **   Reference Category     High Usage   49.3   13.1   **   N.A.     High-Low   39.4   11.3   **   Increase   **     Lower Mid, Downscale, & Low   29.5   34.8   **   N.A.     Prizm Income Group   Lower Middle Class   21.3   25.1   **   Decrease   n.s.     Low Income   Downscale   6.6   8.3   **   Decrease   **	Previous Failure at Income E					Increase	
Household SizeAt Least Six19.99.6**Decrease**Unknown Household Size14.312.0**Reference CategoryNon-High Usage50.786.9**Reference CategoryHigh Usage49.313.1**N.A.High Usage49.313.1**IncreaseHigh Usage49.313.1**IncreaseHigh Usage49.313.1**IncreaseHigh Usage29.534.8**IncreasePrizm Income GroupLower Mid, Downscale, & Low Income29.534.8**DecreasePrizm Income GroupLower Middle Class21.325.1**Decrease**Lower Middle Class21.325.1**Decrease**Lower Middle Class21.325.1**Decrease**Low Income1.61.5n.s.Increase**Low Income1.61.5n.s.Increase**						Decrease	
At Least Six   19.9   9.6   M   Decrease   M     Unknown Household Size   14.3   12.0   **   Reference Category     Non-High Usage   50.7   86.9   **   Reference Category     High Usage   49.3   13.1   **   N.A.     High Usage   49.3   13.1   **   N.A.     Usage Level   High-Low   39.4   11.3   **   Increase   **     High Usage   49.3   39.4   11.3   **   N.A.   **     Prizm Income Group   Lower Mid, Downscale, & Low Income   29.5   34.8   **   N.A.     Prizm Income Group   Lower Middle Class   21.3   25.1   **   Decrease   n.s.     Downscale   6.6   8.3   **   Decrease   **     Low Income   1.6   1.5   n.s.   Increase   **	Housebold Size						
Image level   Non-High Usage   50.7   86.9   **   Reference Category     High Usage   49.3   13.1   **   N.A.     High Usage   49.3   13.1   **   Increase   **     High Usage   49.3   13.1   **   N.A.   **     Image level   High-Low   39.4   11.3   **   Increase   **     High-Low   39.4   11.3   **   Increase   **     Image level   High-Low   29.5   34.8   **   N.A.     Increase   Lower Mid, Downscale, & Low   29.5   34.8   **   N.A.     Income   Downscale   6.6   8.3   **   Decrease   n.s.     Income   Low Income   1.6   1.5   n.s.   Increase   **	Tiousenoid Size						
Usage Level   High Usage   49.3   13.1   **   N.A.     High Usage   High-Low   39.4   11.3   **   Increase   **     High-Low   10.7   39.4   11.3   **   Increase   **     High-Low   10.7   39.4   11.3   **   Increase   **     High-Low   10.7   39.4   11.3   **   Increase   **     Lower Mid, Downscale, & Low   29.5   34.8   **   N.A.   N.A.     Income   Downscale   6.6   8.3   **   Decrease   n.s.     Lower Middle Class   21.3   25.1   **   Decrease   n.s.     Downscale   6.6   8.3   **   Decrease   **							• •
Usage Level   Ingit Osage   49.5   13.1   Image Constraints   Increase     High-Low   39.4   11.3   **   Increase   **     High-High   9.9   1.9   **   Increase   **     Lower Mid, Downscale, & Low Income   29.5   34.8   **   N.A.     Lower Middle Class   21.3   25.1   **   Decrease   n.s.     Lower Middle Class   21.3   25.1   **   Decrease   n.s.     Lower Middle Class   21.3   25.1   **   Decrease   n.s.     Low Income   6.6   8.3   **   Decrease   n.s.		Non-High Usage	50.7	86.9	**	Reference Cat	tegory
High-Low 39.4 11.3 Increase Increase   High-High 9.9 1.9 ** Increase **   Lower Mid, Downscale, & Low 29.5 34.8 ** N.A.   Income Lower Middle Class 21.3 25.1 ** Decrease n.s.   Downscale 6.6 8.3 ** Decrease **   Low Income 1.6 1.5 n.s. Increase **	Usage Level	High Usage	49.3		**	N.A.	
Initial Pright Pright 9.9 1.9 Initial Price Price   Prizm Income Group Lower Mid, Downscale, & Low Income 29.5 34.8 ** N.A.   Lower Middle Class 21.3 25.1 ** Decrease n.s.   Downscale 6.6 8.3 ** Decrease **   Low Income 1.6 1.5 n.s. Increase **		High-Low	39.4	11.3	**	Increase	**
Prizm Income GroupIncome29.534.8N.A.Lower Middle Class21.325.1**Decreasen.s.Downscale6.68.3**Decrease**Low Income1.61.5n.s.Increasen.s.		High-High	9.9	1.9	**	Increase	**
Prizm Income Group   Downscale   6.6   8.3   **   Decrease   **     Low Income   1.6   1.5   n.s.   Increase   n.s.			29.5	34.8	**	N.A.	
Downscale6.68.3DecreaseLow Income1.61.5n.s.Increasen.s.		Lower Middle Class	21.3	25.1	**	Decrease	n.s.
	Prizm income Group	Downscale	6.6	8.3	**	Decrease	**
Other Prizm Segments 70.5 65.2 ** Reference Category		Low Income	1.6	1.5	n.s.	Increase	n.s.
		Other Prizm Segments	70.5	65.2	**	Reference Cat	tegory

### STATISTICAL FINDINGS 2 of 2

	DURATION FR	N				
VERIFICATION as of APRIL 3, 2015	Minimum	Maximum	Mean	Median	iN	
CLOSED FAILED	0.00274	25.15264	2.88582	1.70021	69,937	
CLOSED PASS or OPEN	0.41342	25.53320	4.85617	3.09103	18,534	
CLOSED PASS	0.41342	25.53320	4.91111	3.14305	17,662	
OPEN	0.44353	21.05133	3.74337	2.23135	872	
TOTAL	0.00274	25.53320	3.29860	1.96030	88,471	

#### Survival Function at mean of covariates



## CONCLUSIONS

#### MARGINAL IMPACT of FACTORS on PROBABILITY of FAILING CARE ELIGIBILITY VERIFICATION

DECREASE				
Categorical Program Participation	Enrollment through CARE Application, External Data Sharing, Internet Application, Special Projects			
Enrollment through Recertification/Verification	Residence in "High" or Unknown Income County ZIP5 Area			
Increasing Household Size	Previous Failure at Income Eligibility Verification			
"Downscale" Prizm SegmentHigh Usage, especially "High-HighAffiliationUsage Customers				
Length of stay in the program from most recent enrollment to determination of outcome of eligibility verification tends to be significantly longer among those who passed than those who failed verification. In effect, those who				

have been in CARE for a longer time tend to pass verification than those who have been in the program for a relatively shorter period.

