

California Electrical Examinations Statistical Overview 2015-16

Background: PSI began administering the following California Electrical examinations in 2009: General Electrician, Residential Electrician, Non-Residential Lighting Technician, Fire-Life Safety Technician, and Voice Data Video Technician. PSI currently administers both English and Spanish versions of these examinations.

Statistical Review of the Examinations: PSI recently conducted a statistical review of the California Electrical examinations from November 1, 2015 to September 1, 2016. The statistical results are compiled in the table below.

Exam	Annual # of Attempts	Test Length	First Time Pass Rate	Repeat Pass Rate	Average P-Value	Average PBIS	Average Item N
General Electrician	3830	100	53.34%	33.85%	.683	.301	1611.67
General Electrician – SPANISH	14	100	0.00%	0.00%	.422	.164	8.71
Residential Electrician	276	80	26.79%	26.85%	.626	.303	103.70
Residential Electrician - SPANISH	9	80	0.00%	0.00%	.417	.219	5.59
Non-Residential Lighting Technician	69	50	32.61%	30.43%	.636	.295	43.06
Non-Residential Lighting Technician - Spanish	11	50	0.00%	0.00%	.520	.211	6.78
Fire-Life Safety Technician	298	50	59.43%	44.19%	.711	.288	137.67
Fire-Life Safety Technician – Spanish	0	50	NA	NA	NA	NA	NA
Voice Data Video Technician	169	50	50.00%	57.63%	.688	.262	74.62
Voice Data Video Technician - SPANISH	0	50	N/A	N/A	N/A	N/A	N/A

The statistics listed in each of the table's columns is described below:

Annual # of Attempts: The approximate number of candidates (both first time candidates and repeat candidates) taking the exam each year.

Test Length: The number of items in the test.

First Time Pass Rate: The passing percentage of those candidates taking the test for the first time.

Repeat Pass Rate: The passing percentage of those candidates taking the test for the second (or more) time.

Average P-Value: The average number of candidates that get each test question correct

Average PBIS: The biserial correlation is an indication of how well each item differentiates between the good candidates and the poorer candidates. These correlations can from -1.00 (negatively correlated) to 0 (no correlation) to +1.00 (positive correlation). For exams with a high enough sample size (over 30), an average PBIS over 0.20 is acceptable, and an average PBIS over 0.30 is considered to be good.

Average Item N: The average number of candidates that have taken each item. Statistics generated from sample sizes below 30 are typically regarded as being unstable.

N/A: Not enough candidate data to calculate meaningful averages