

## California Electrical Examinations Statistical Overview 2018

**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 January 1, 2018 to December 31, 2018. 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	4428	100	40.75%	38.27%	.663	.339	594.38
General Electrician – SPANISH	18	100	0.00%	0.00%	.354	.139	5.70
Residential Electrician	318	80	29.19%	29.36%	.601	.328	82.41
Residential Electrician - SPANISH	8	80	0.00%	33.33%	.449	.048	1.88
Non-Residential Lighting Technician	61	50	47.73%	41.18%	.680	.322	26.88
Non-Residential Lighting Technician - Spanish	7	50	0.00%	0.00%	.420	.120	2.00
Fire-Life Safety Technician	409	50	52.65%	54.31%	.718	.315	115.06
Fire-Life Safety Technician – Spanish	0	50	N/A	N/A	N/A	N/A	N/A
Voice Data Video Technician	176	50	60.63%	53.06%	.703	.287	55.75
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 are 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