

## APPENDIX 8B. LIFE-CYCLE COST AND PAYBACK PERIOD RESULTS

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## APPENDIX 8B. LIFE-CYCLE COST AND PAYBACK PERIOD RESULTS

### 8B.1 LIFE-CYCLE COST AND PAYBACK PERIOD RESULTS

**Table 8B.1.1 Polyphase Motors: Life-Cycle Cost and Payback Period Results**

Energy Efficiency Level	Efficiency (%)	Life-Cycle Cost				Life-Cycle Cost Savings			Payback Period (years)	
		Average Installed Price (\$)	Average Annual Energy Use (KWh)	Average Annual Operating Cost (\$)	Average Cost (\$)	Average Savings (\$)	Consumers with			
							Net Cost (%)	Net Benefit (%)	Average	Median
Baseline	78.77%	516	1892	24	1315					
1	80.61%	529	1842	135	1306	9	45.3	54.7	21.1	6.7
2	81.95%	536	1796	131	1294	21	40.4	59.6	17.3	5.4
3	83.39%	548	1737	127	1280	35	39.7	60.3	17.2	5.3
4	83.97%	557	1721	126	1282	33	43.7	56.3	19.8	6.2
4B	86.07%	588	1642	120	1281	34	49.8	50.2	24.1	7.4
5	87.60%	653	1607	117	1330	-15	64.5	35.5	40.2	11.7
6	88.36%	709	1586	116	1377	-62	75.6	24.4	52.6	16.1
7	89.70%	1472	1559	114	2131	-816	95.8	4.2	234.6	48.7

**Table 8B.1.2 Capacitor-Start Induction Motors: Life-Cycle Cost and Payback Period Results**

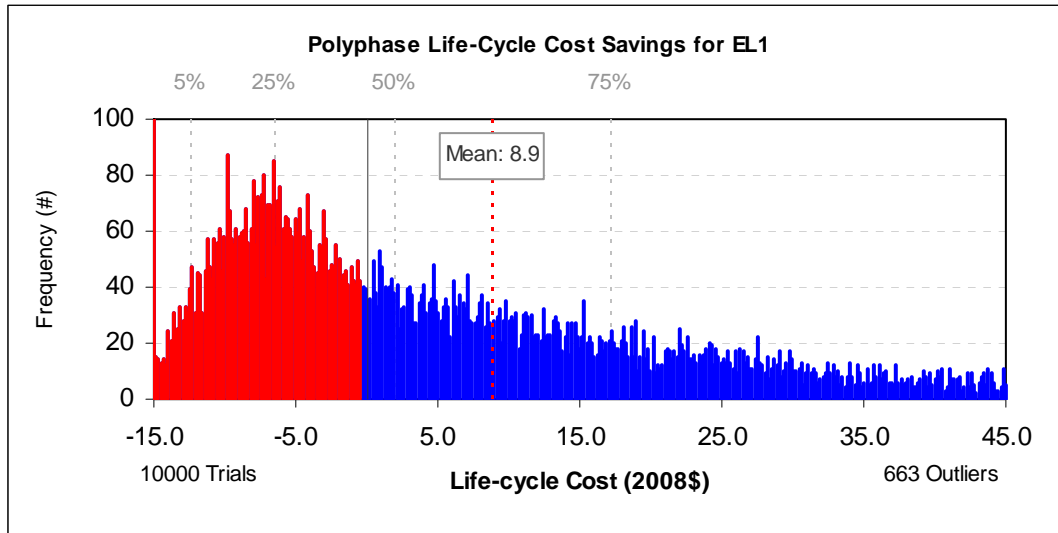
Energy Efficiency Level	Efficiency (%)	Life-Cycle Cost				Life-Cycle Cost Savings			Payback Period (years)	
		Average Installed Price (\$)	Average Annual Energy Use (KWh)	Average Annual Operating Cost (\$)	Average Cost (\$)	Average Savings (\$)	Consumers with			
							Net Cost (%)	Net Benefit (%)	Average	Median
CSCR Baseline	51.75%	498	1128	82	875					
CSIR Baseline	49.87%	498	1271	92	924					
1	53.19%	506	1187	86	904	20	26.9	73.1	8.6	2.5
2	55.72%	513	1129	82	891	33	27.7	72.3	8.8	2.6
3	58.08%	515	1075	78	875	49	23.7	76.3	7.5	2.2
4	63.47%	534	983	71	862	62	31.4	68.7	10.5	3.1
5	64.81%	554	957	69	873	51	40.7	59.3	15.1	4.5
6	66.28%	598	924	67	907	17	54.3	45.8	24.9	7.0
7	71.48%	1006	862	63	1294	-370	64.8	35.2	108.5	11.9

**Table 8B.1.3 Capacitor-Start Capacitor Run Motors: Life-Cycle Cost and Payback Period Results**

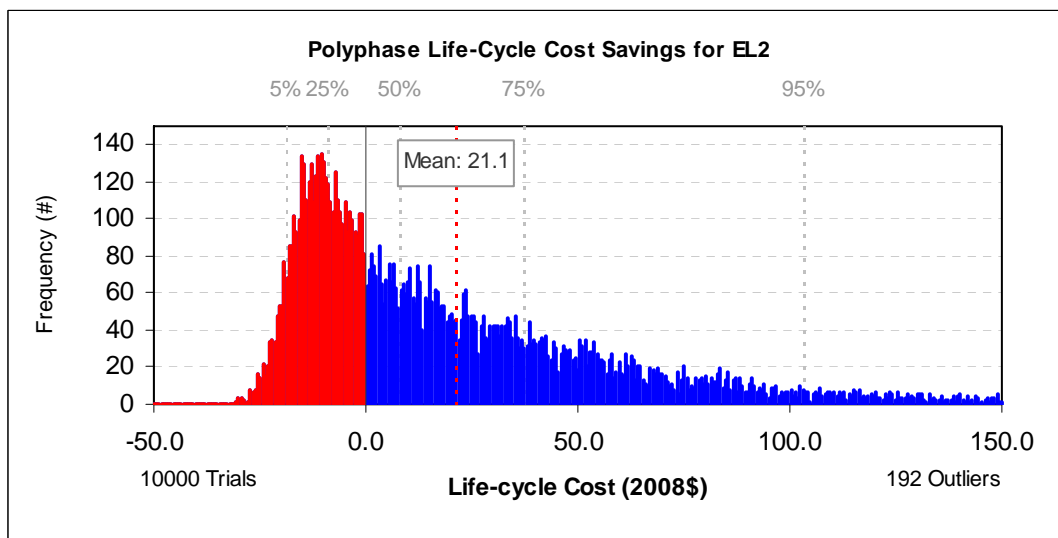
Energy Efficiency Level	Efficiency (%)	Life-Cycle Cost				Life-Cycle Cost Savings			Payback Period (years)	
		Average Installed Price (\$)	Average Annual Energy Use (KWh)	Average Annual Operating Cost (\$)	Average Cost (\$)	Average Savings (\$)	Consumers with		Average	Median
							Net Cost (%)	Net Benefit (%)		
CSIR Baseline	65.49%	617	2669	194	1517					
CSCR Baseline	73.16%	584	2294	167	1355					
1	76.74%	596	2193	160	1331	24	29.5	70.5	10.7	3.3
2	80.95%	628	2022	147	1304	50	39.1	60.9	14.8	4.4
3	82.99%	642	1951	142	1294	61	40.4	59.6	15.3	4.5
4	84.00%	656	1966	143	1310	45	46.6	53.4	19.5	5.9
5	85.20%	676	1945	142	1323	31	52.7	47.3	23.6	7.2
6	85.94%	721	1910	139	1356	-2	60.3	39.7	32.3	9.0
7	87.77%	752	1860	136	1370	-16	64.8	35.2	34.8	10.0
8	88.95%	1634	1811	132	2236	-881	94.8	5.3	200.0	37.6

## 8B.2 DISTRIBUTION OF LIFE-CYCLE COST RESULTS

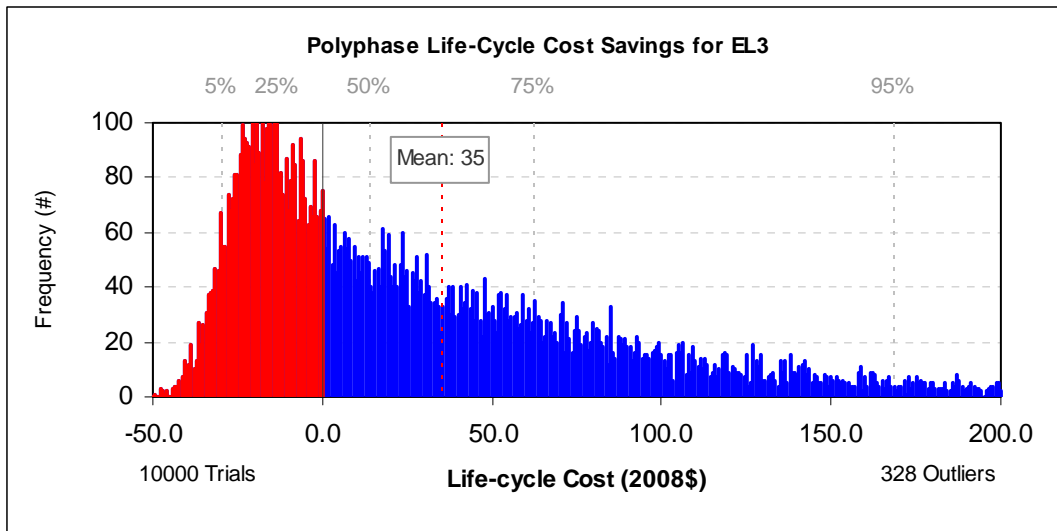
### 8B.2.1 Polyphase Motors



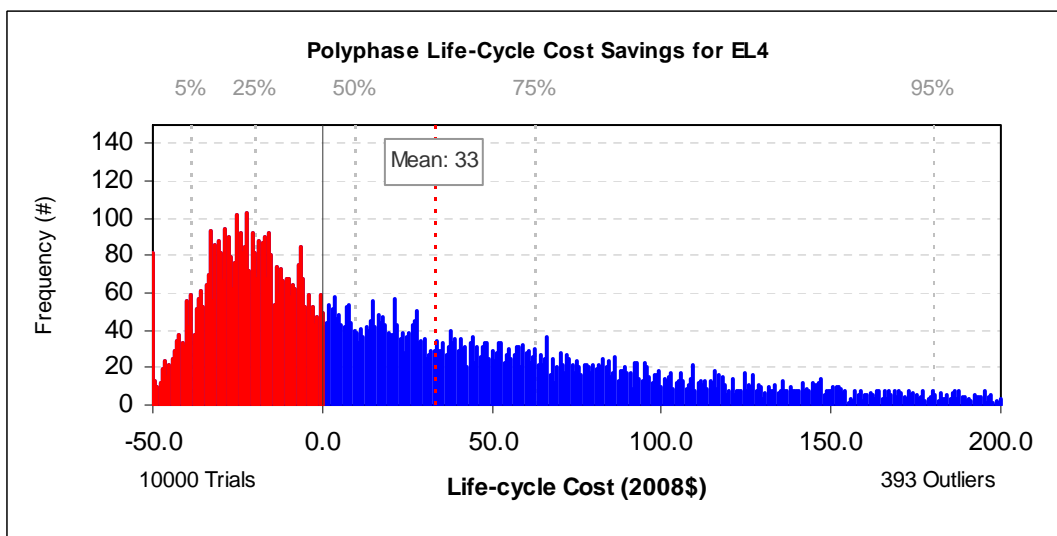
**Figure 8B.2.1 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 1**



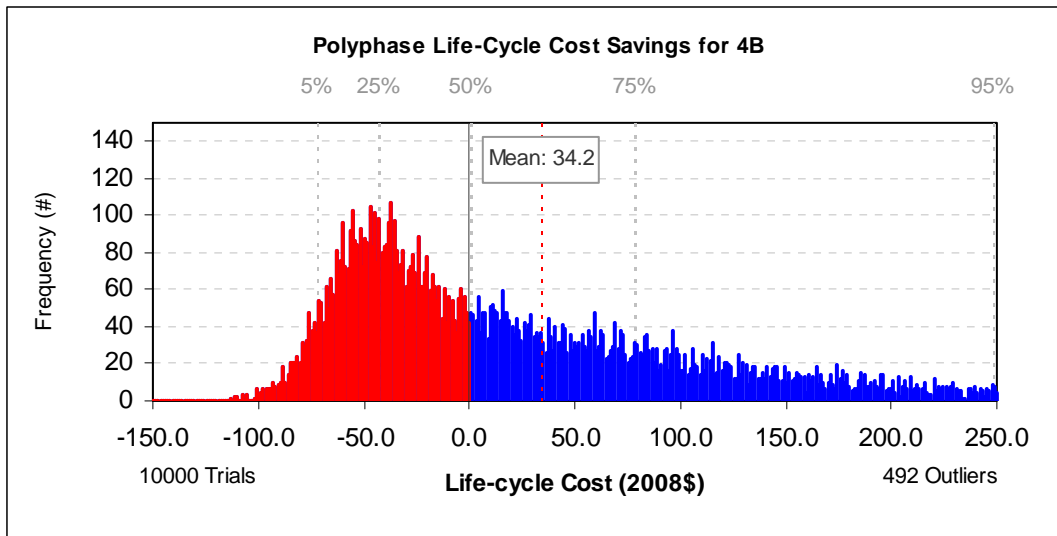
**Figure 8B.2.2 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 2**



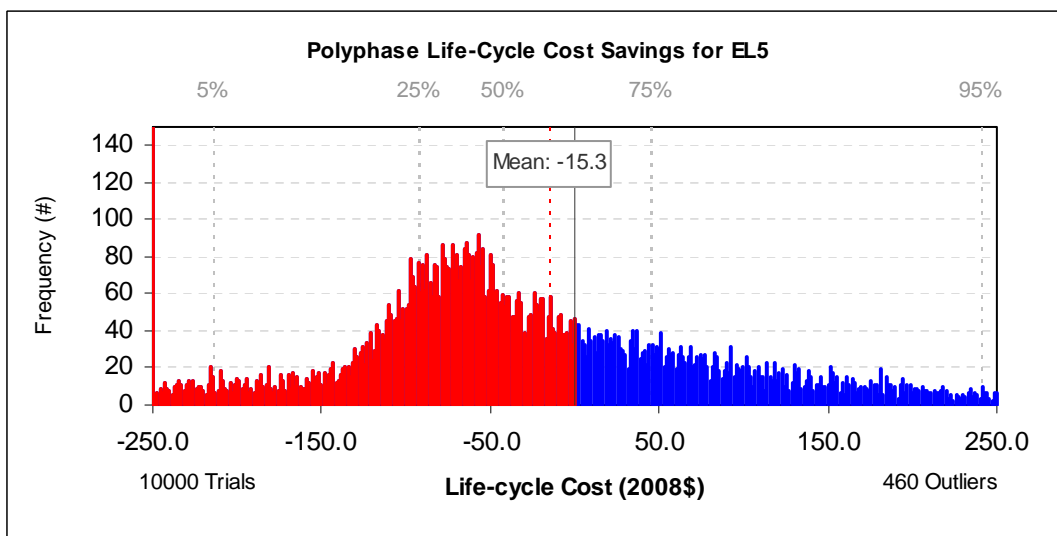
**Figure 8B.2.3 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 3**



**Figure 8B.2.4 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 4**

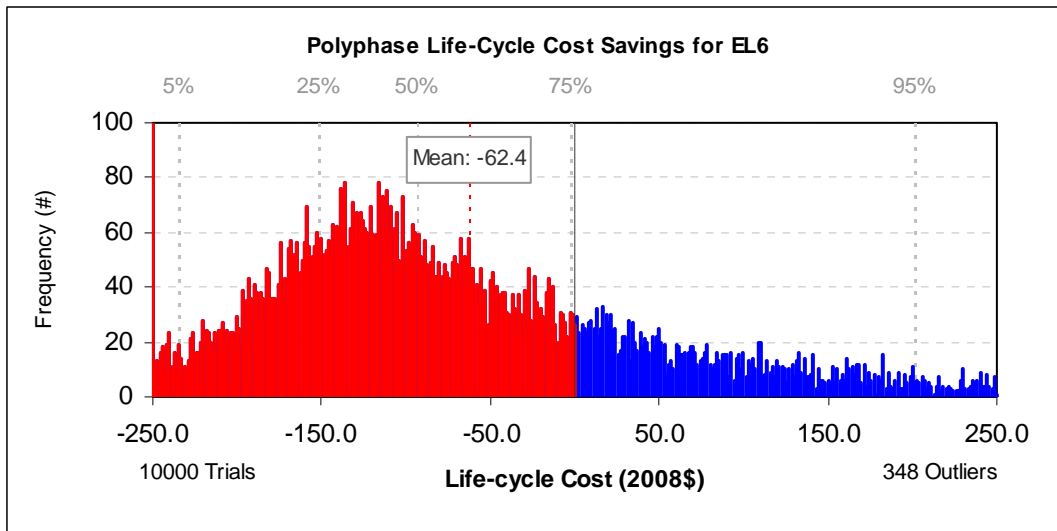


**Figure 8B.2.5 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 4B**

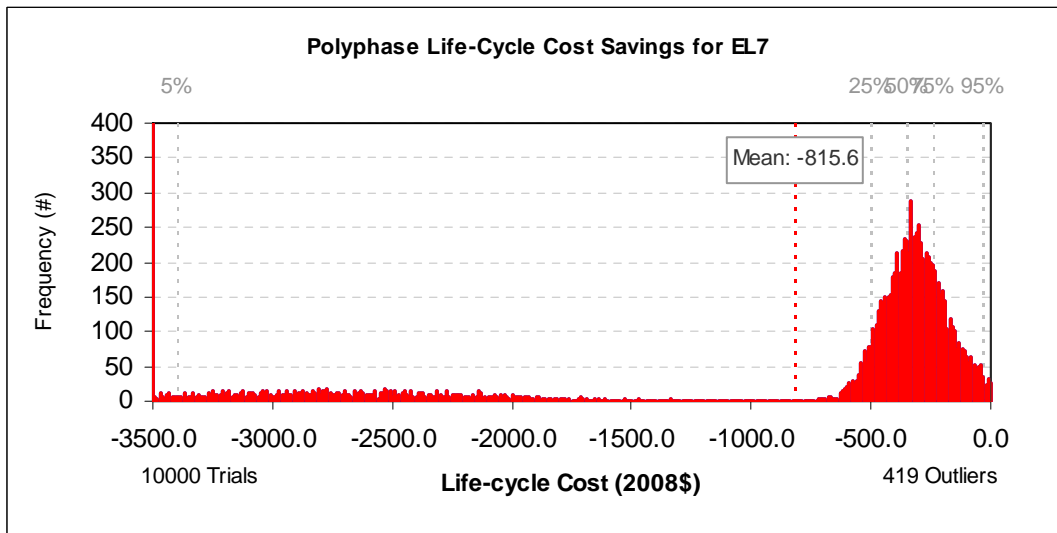


**Figure 8B.2.6 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 5**



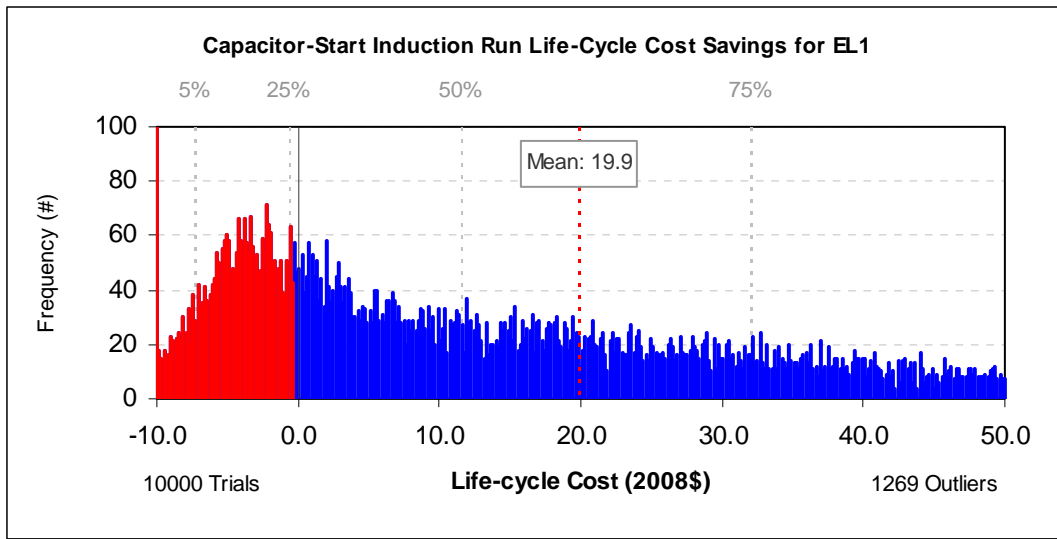


**Figure 8B.2.7 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 6**

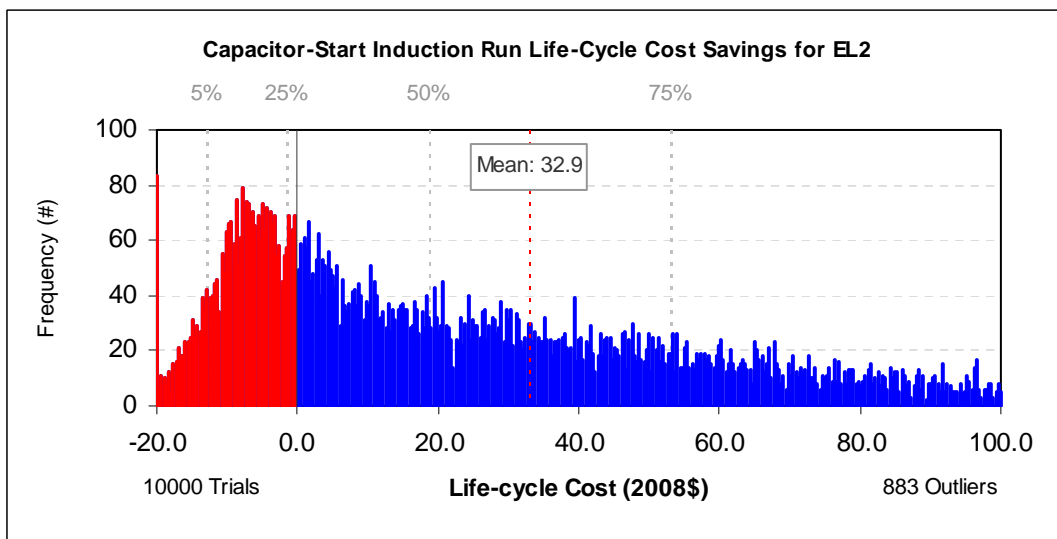


**Figure 8B.2.8 Polyphase Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 7**

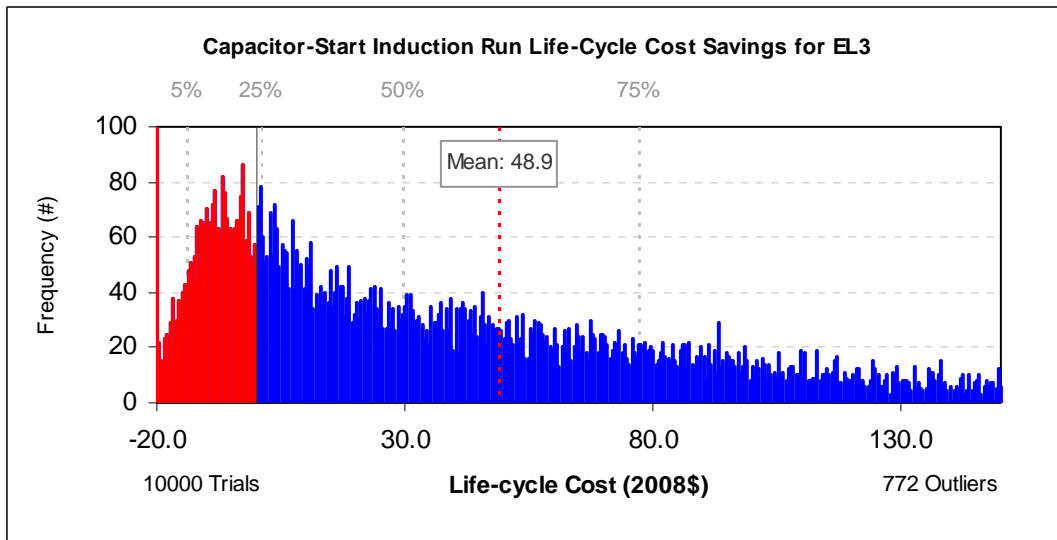
## 8B.2.2 Capacitor-Start Induction Run Motors



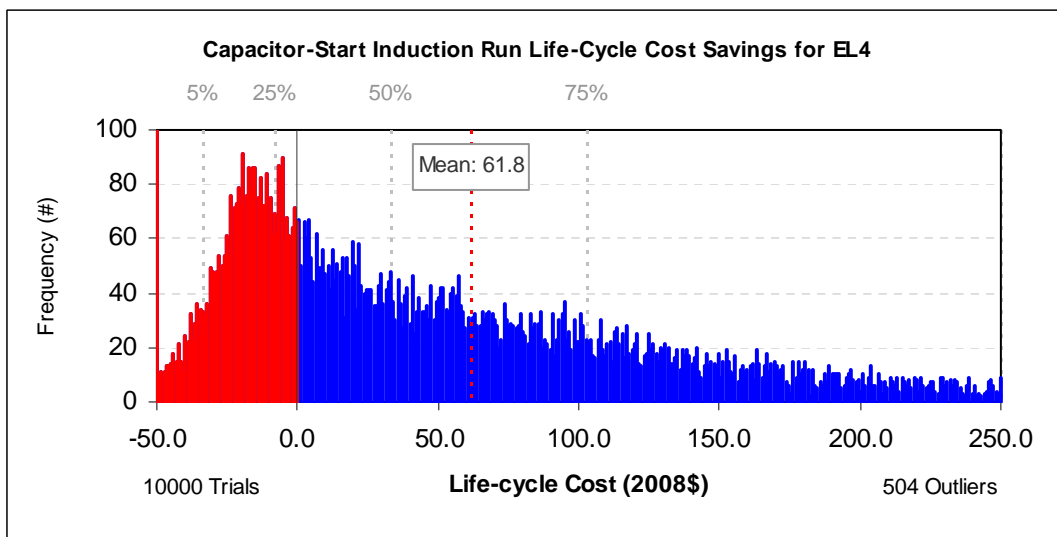
**Figure 8B.2.9** Capacitor-Start Induction Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 1



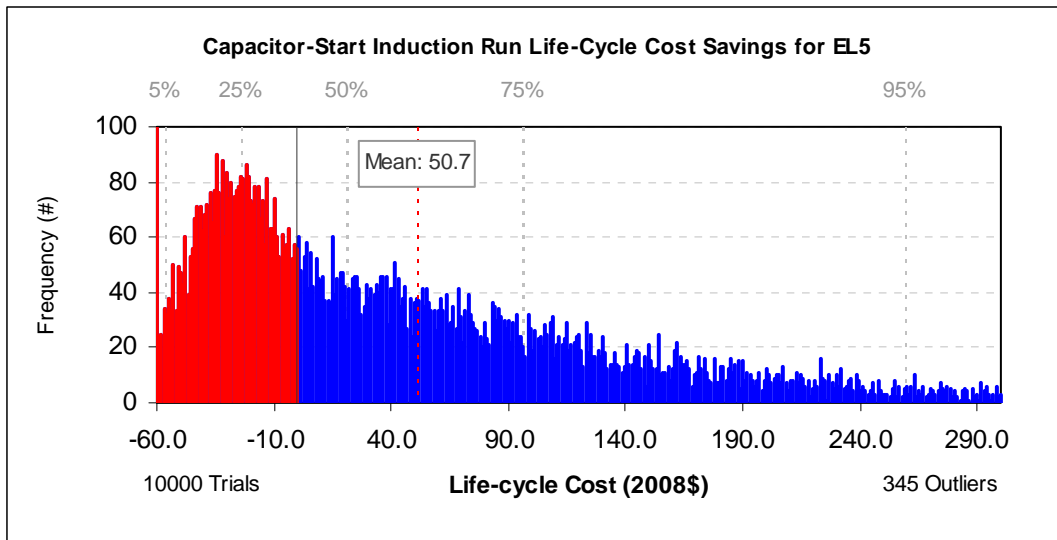
**Figure 8B.2.10** Capacitor-Start Induction Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 2



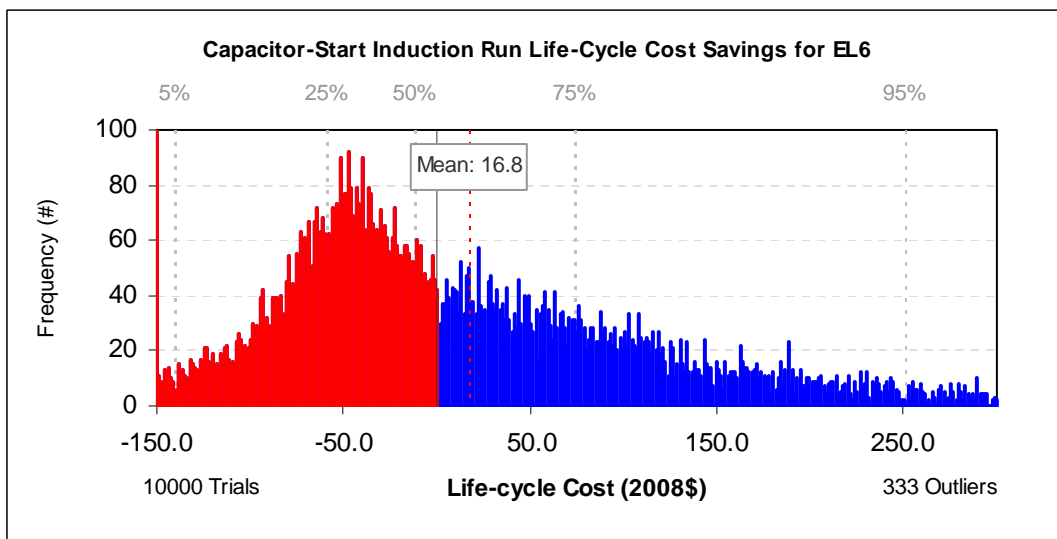
**Figure 8B.2.11 Capacitor-Start Induction Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 3**



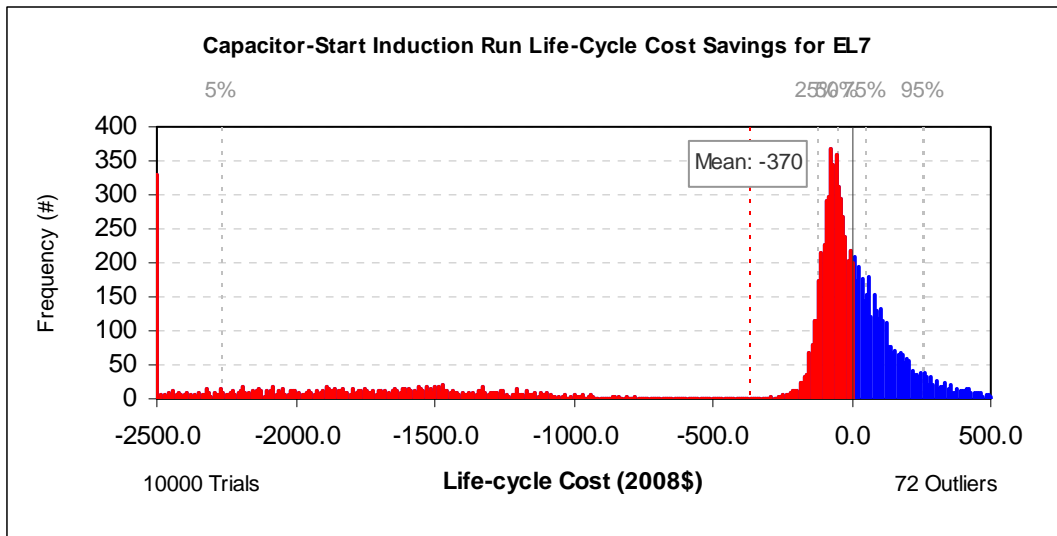
**Figure 8B.2.12 Capacitor-Start Induction Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 4**



**Figure 8B.2.13 Capacitor-Start Induction Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 5**

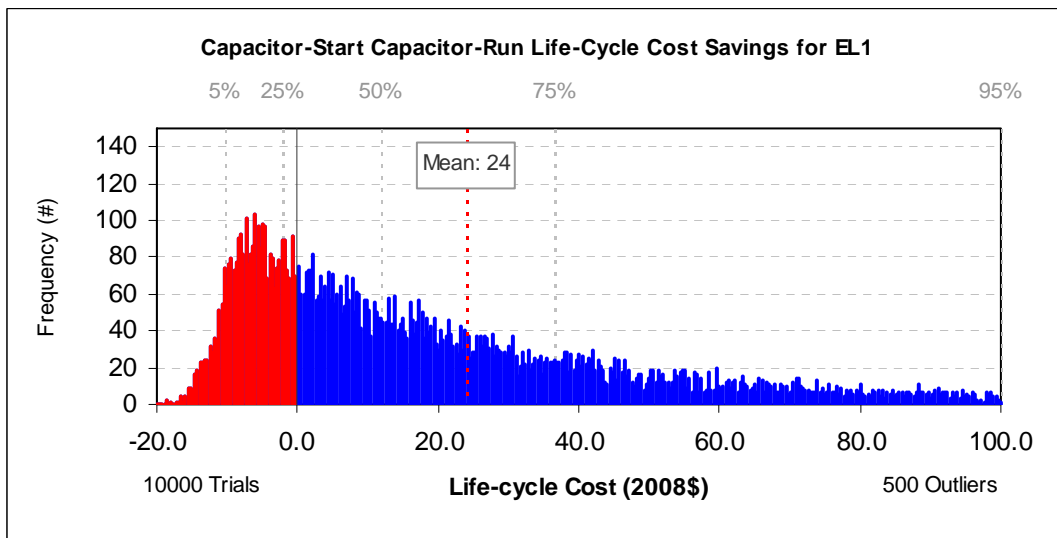


**Figure 8B.2.14 Capacitor-Start Induction Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 6**

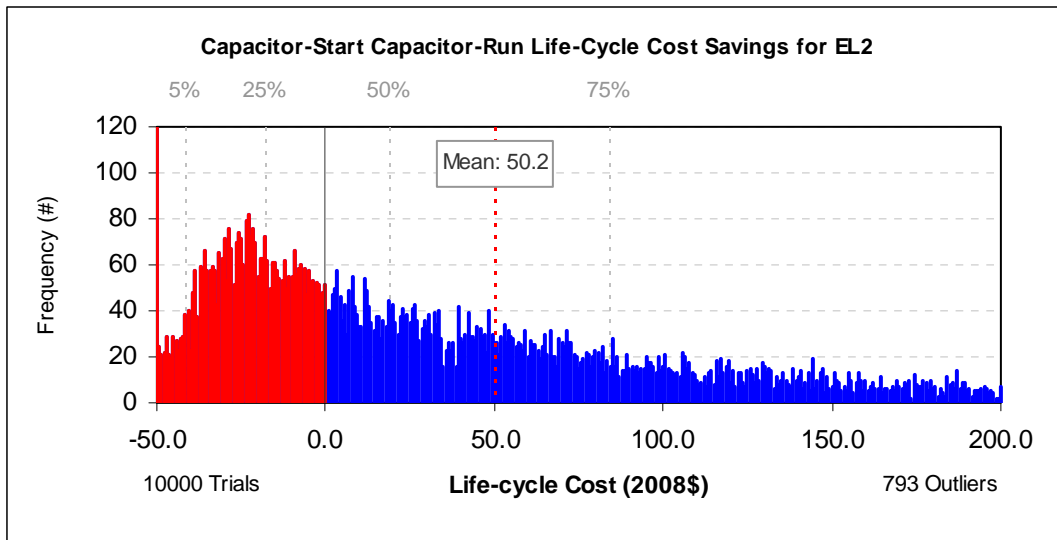


**Figure 8B.2.15 Capacitor-Start Induction Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 7**

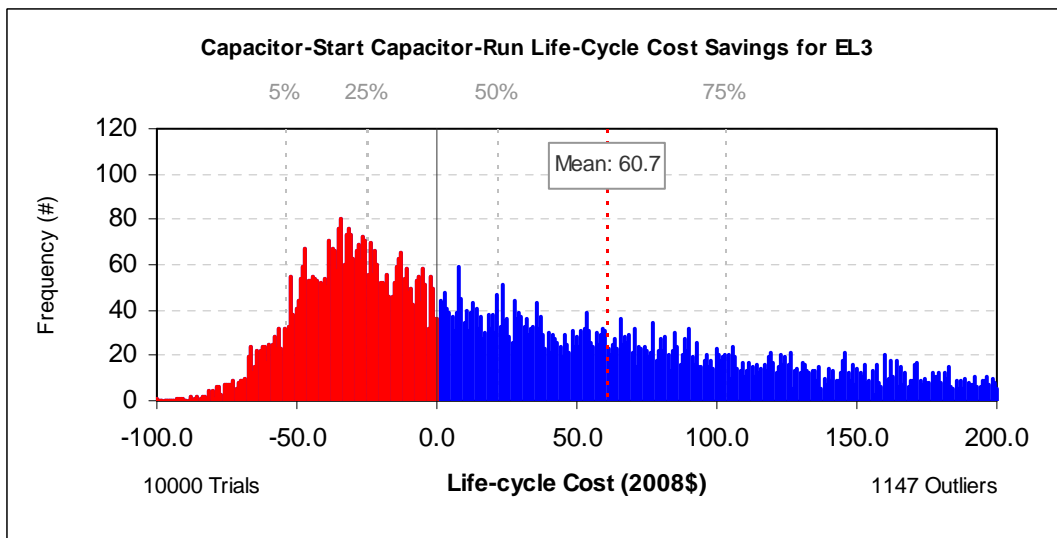
### 8B.2.3 Capacitor-Start Capacitor Run Motors



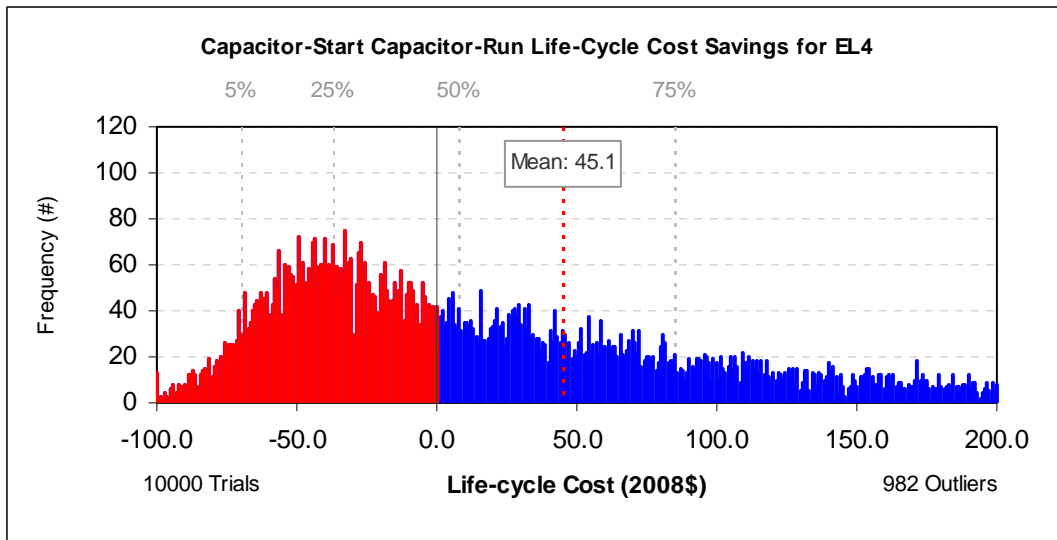
**Figure 8B.2.16 Capacitor-Start Capacitor Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 1**



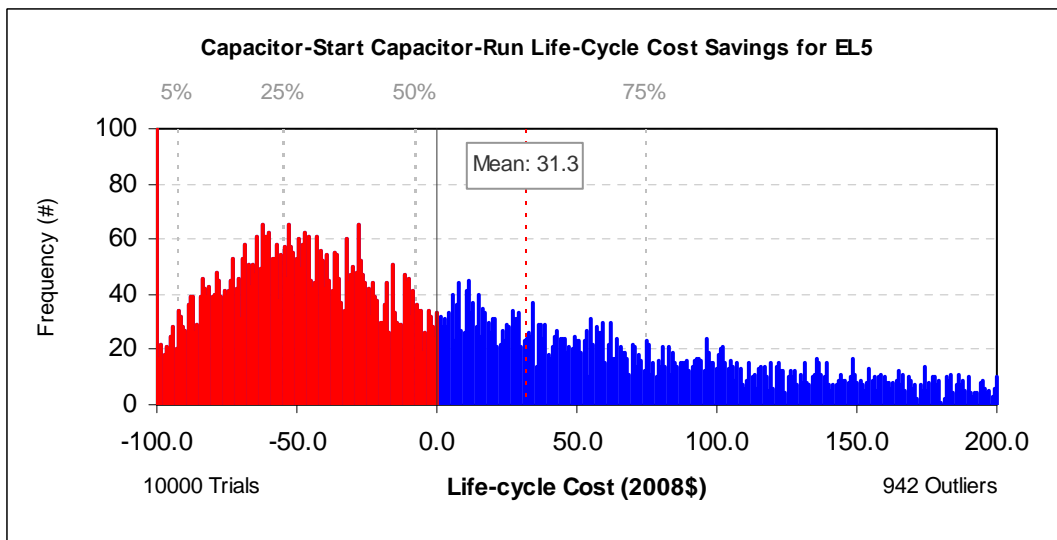
**Figure 8B.2.17 Capacitor-Start Capacitor Run Motors:  
Distribution of Life-Cycle Cost Impacts for  
Efficiency Level 2**



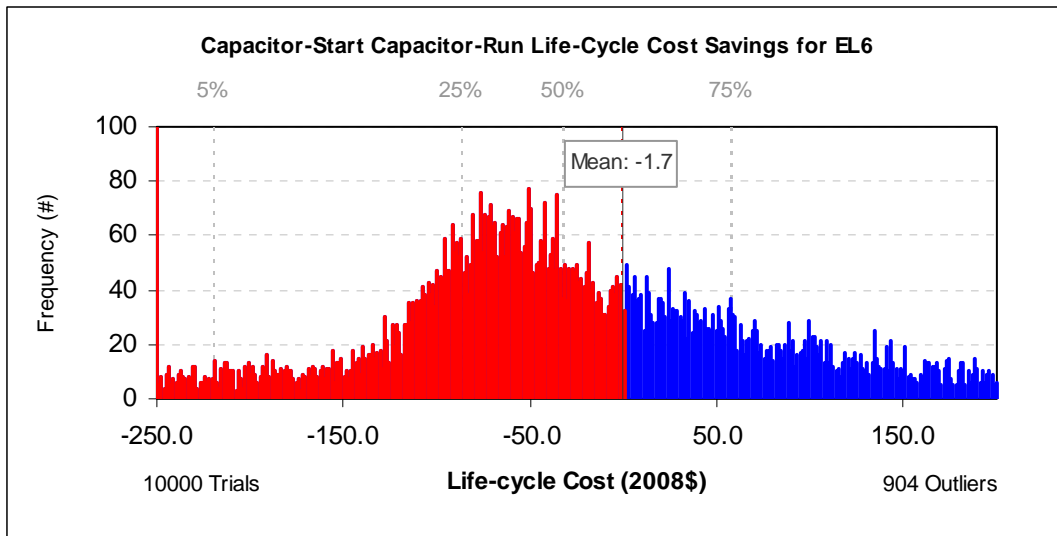
**Figure 8B.2.18 Capacitor-Start Capacitor Run Motors:  
Distribution of Life-Cycle Cost Impacts for  
Efficiency Level 3**



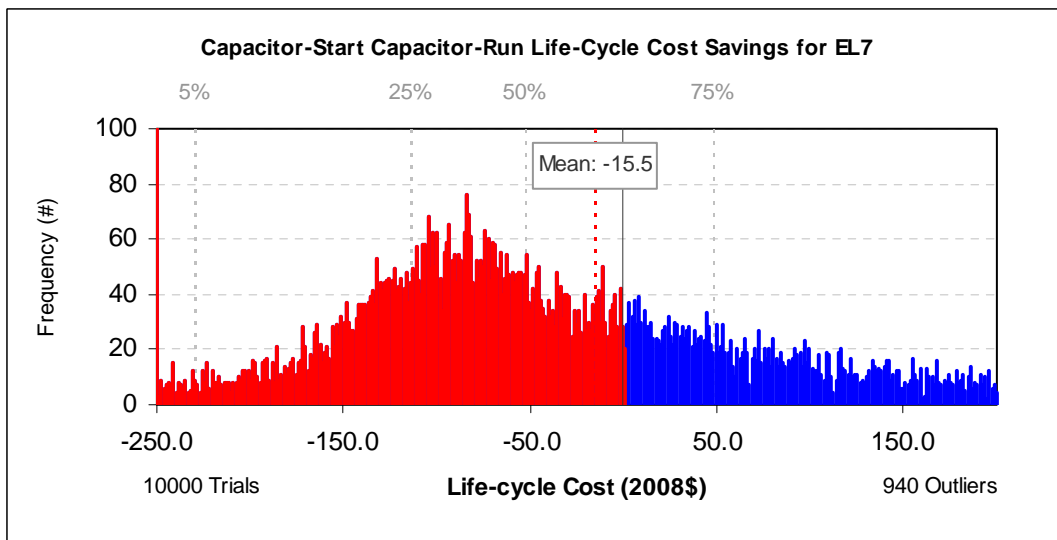
**Figure 8B.2.19 Capacitor-Start Capacitor Run Motors:  
Distribution of Life-Cycle Cost Impacts for  
Efficiency Level 4**



**Figure 8B.2.20 Capacitor-Start Capacitor Run Motors:  
Distribution of Life-Cycle Cost Impacts for  
Efficiency Level 5**

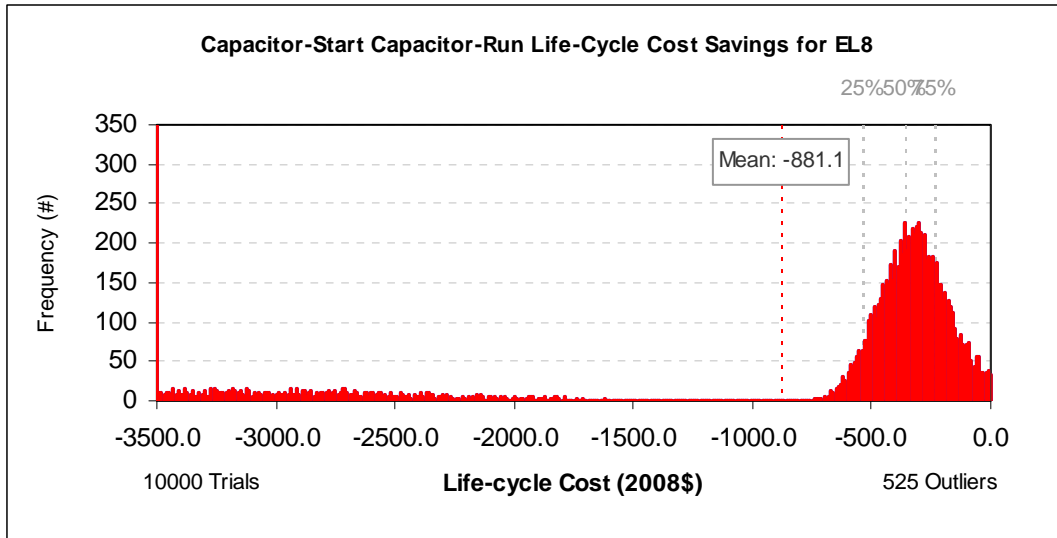


**Figure 8B.2.21 Capacitor-Start Capacitor Run Motors:  
Distribution of Life-Cycle Cost Impacts for  
Efficiency Level 6**



**Figure 8B.2.22 Capacitor-Start Capacitor Run Motors:  
Distribution of Life-Cycle Cost Impacts for  
Efficiency Level 7**

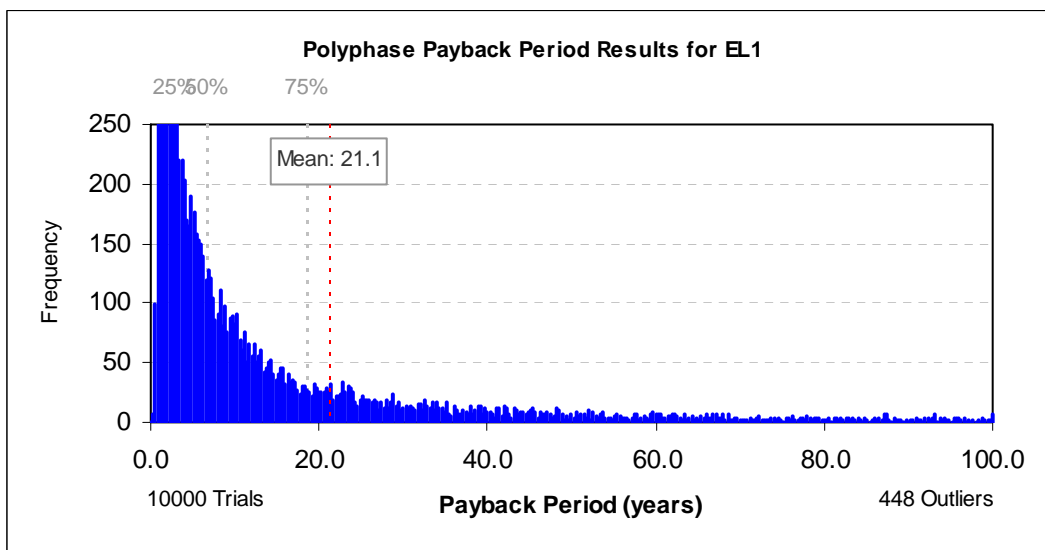




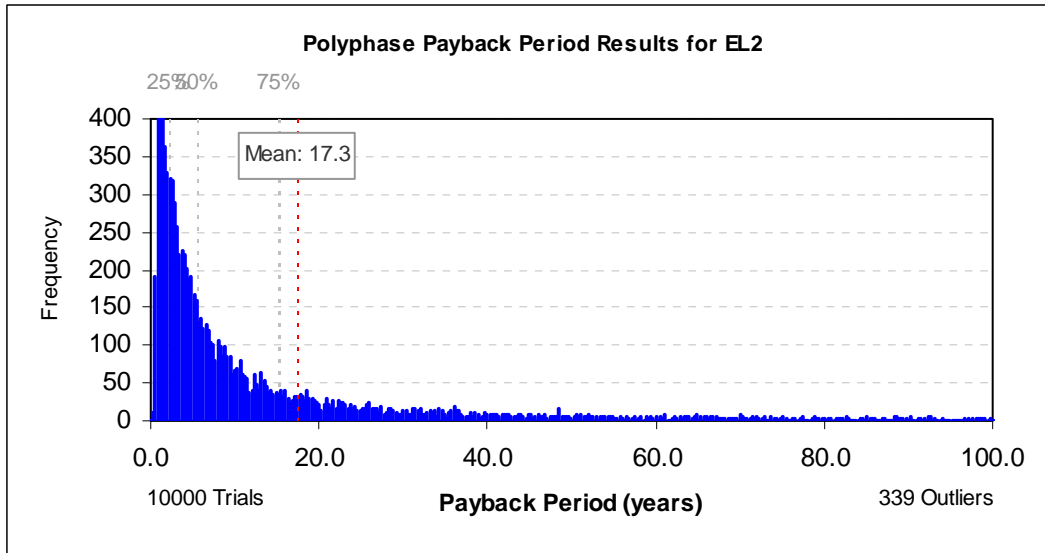
**Figure 8B.2.23 Capacitor-Start Capacitor Run Motors: Distribution of Life-Cycle Cost Impacts for Efficiency Level 8**

### 8B.3 DISTRIBUTION OF PAYBACK PERIOD RESULTS

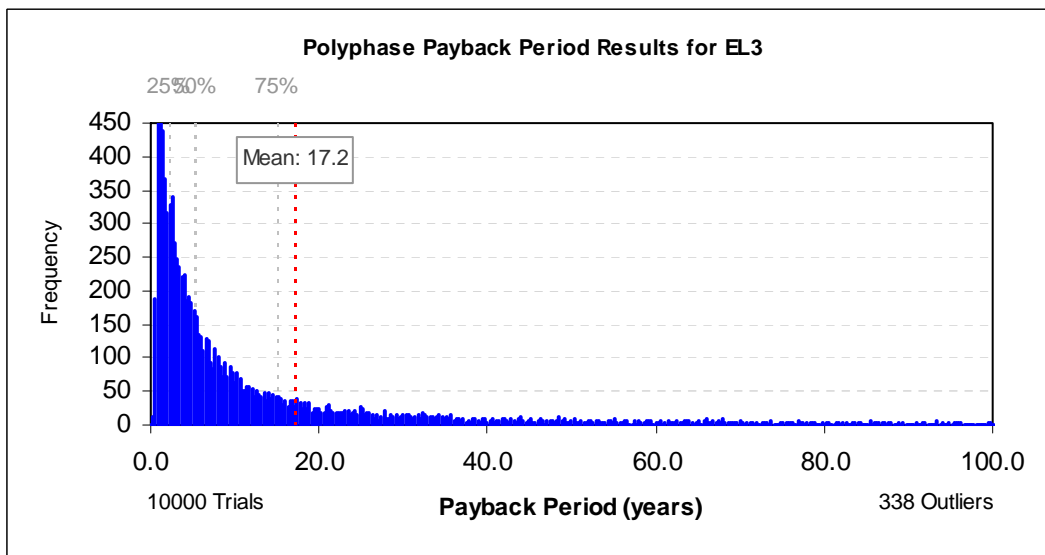
#### 8B.3.1 Polyphase Motors



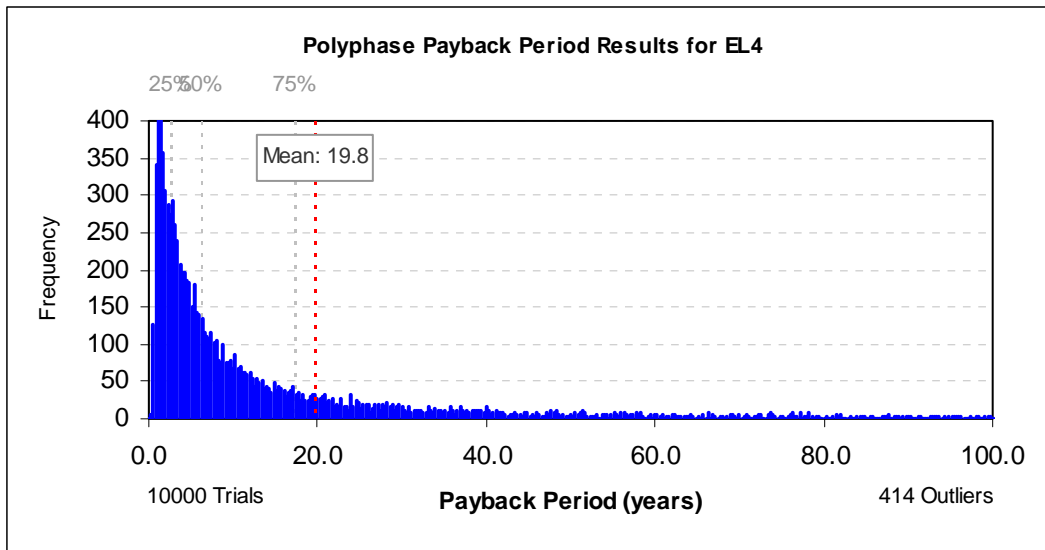
**Figure 8B.3.1 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 1**



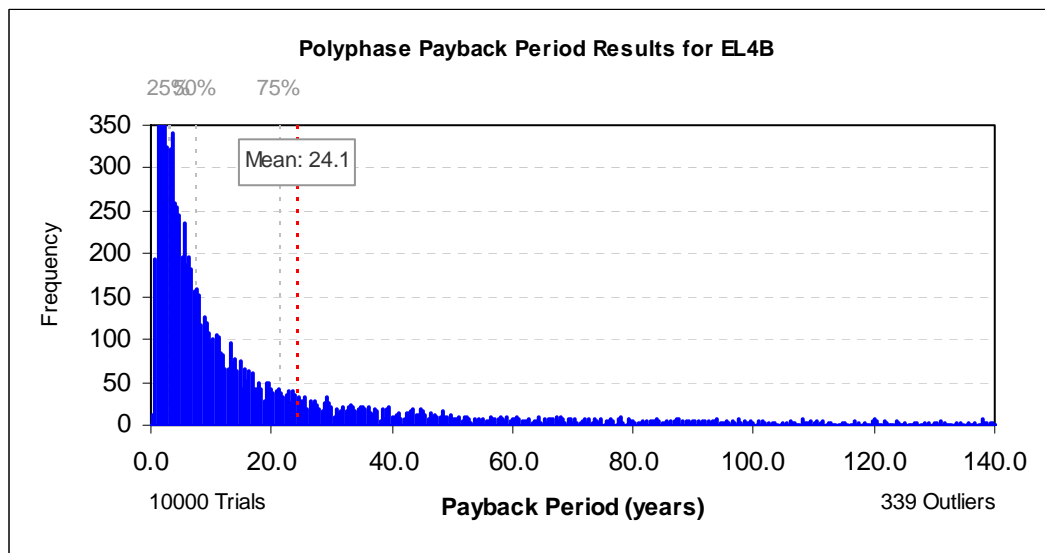
**Figure 8B.3.2 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 2**



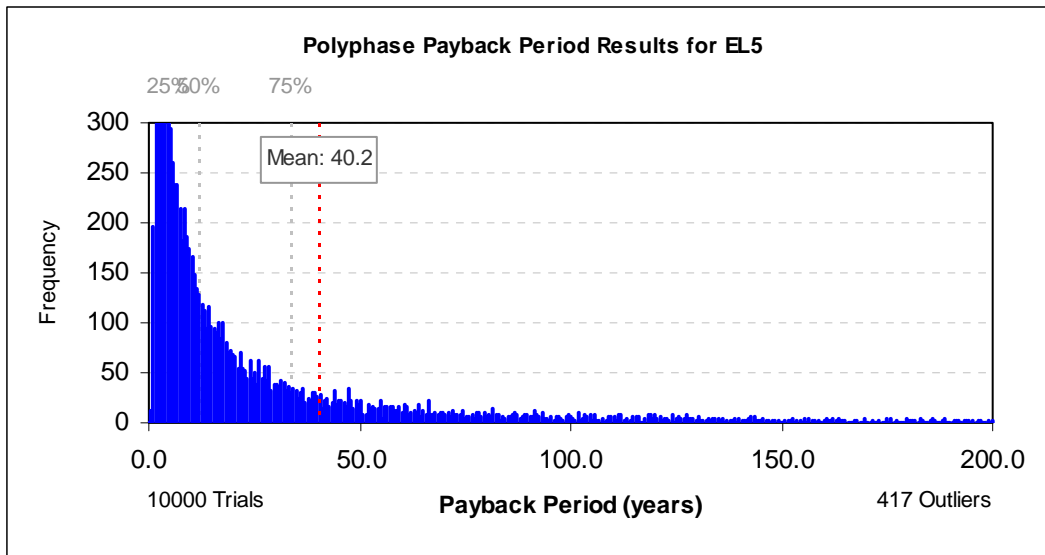
**Figure 8B.3.3 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 3**



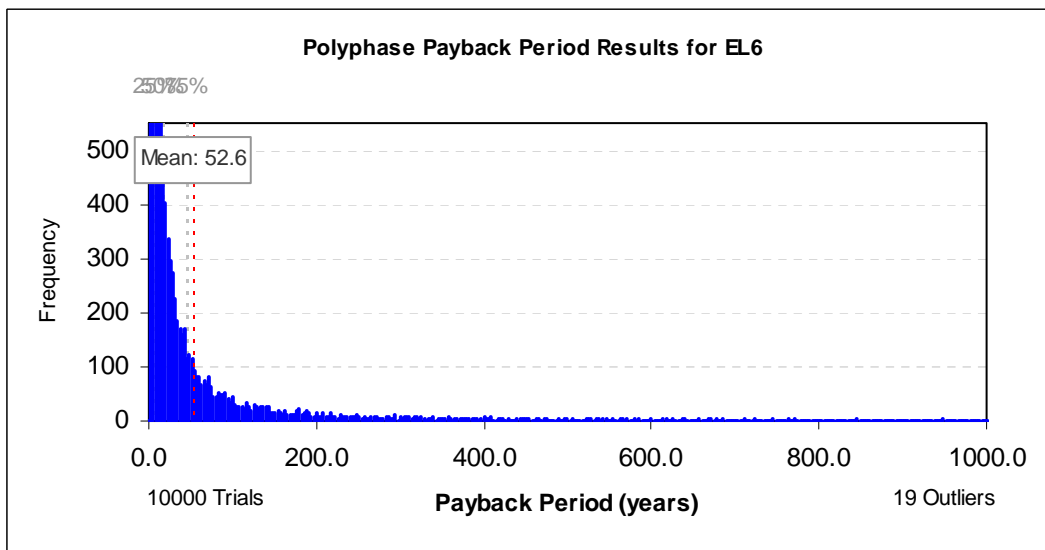
**Figure 8B.3.4 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 4**



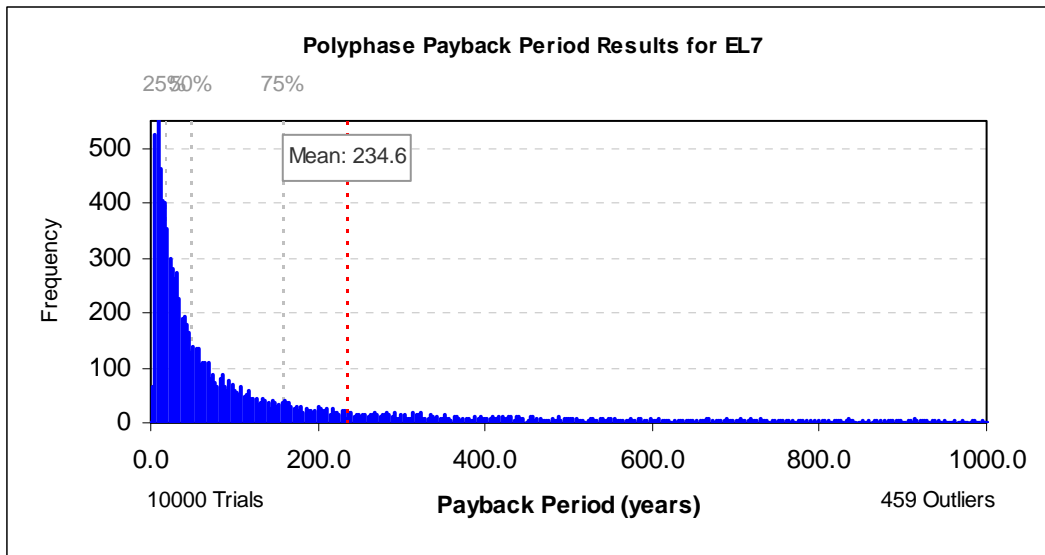
**Figure 8B.3.5 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 4B**



**Figure 8B.3.6 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 5**

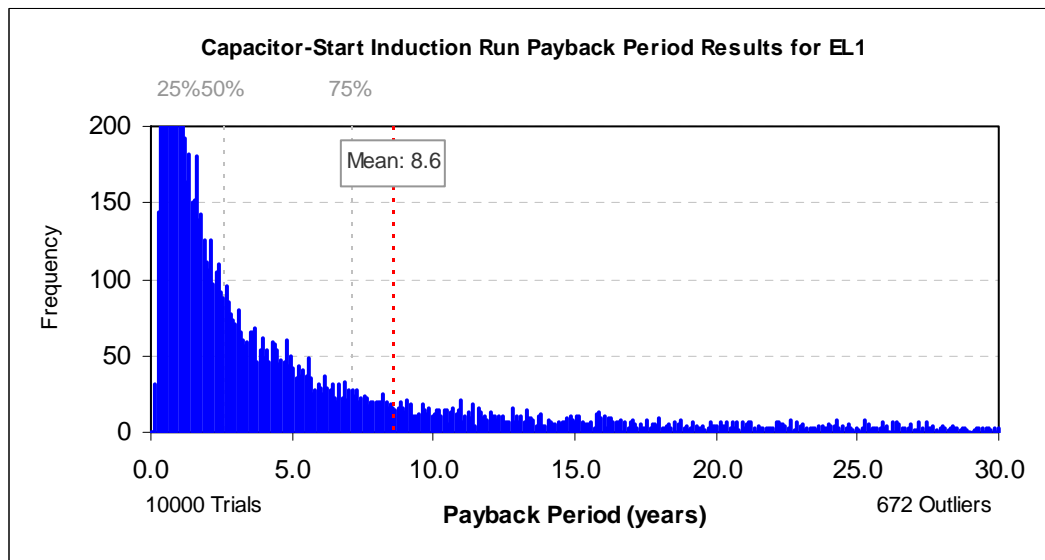


**Figure 8B.3.7 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 6**

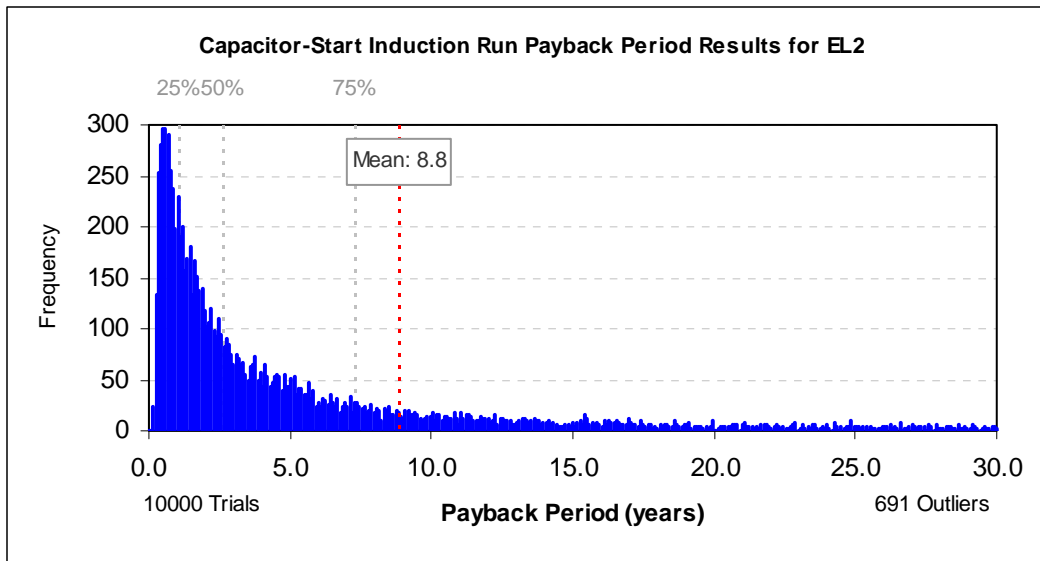


**Figure 8B.3.8 Polyphase Motors: Distribution of Payback Period Impacts for Efficiency Level 7**

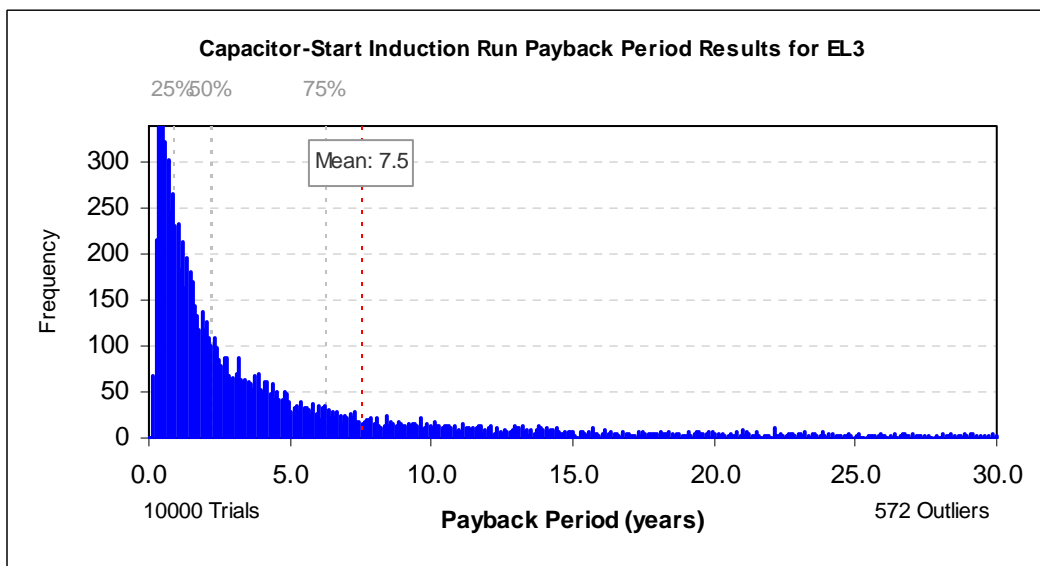
### 8B.3.2 Capacitor-Start Induction Run Motors



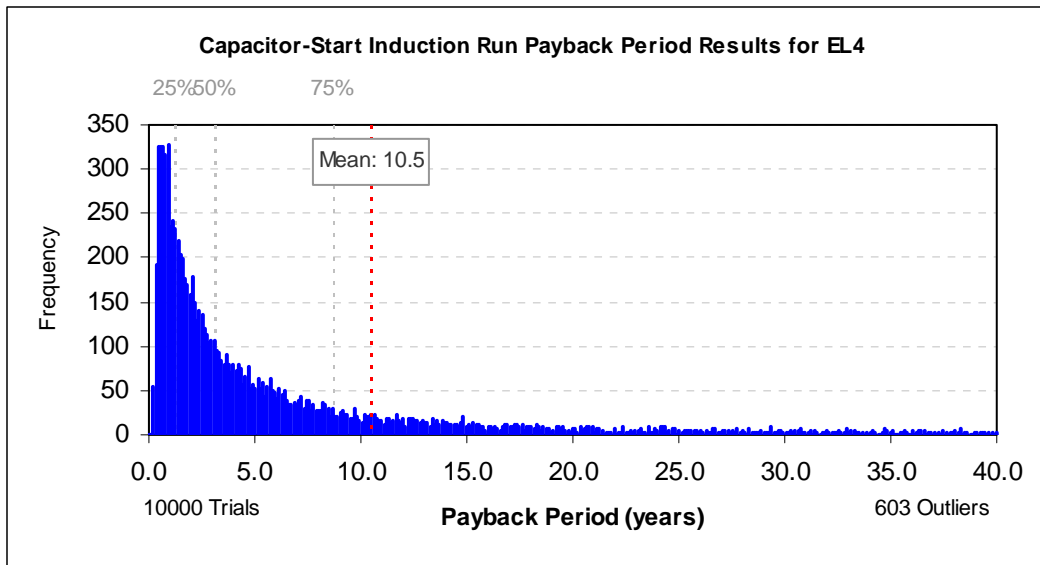
**Figure 8B.3.9 Capacitor-Start Induction Run Motors: Distribution of Payback Period Impacts for Efficiency Level 1**



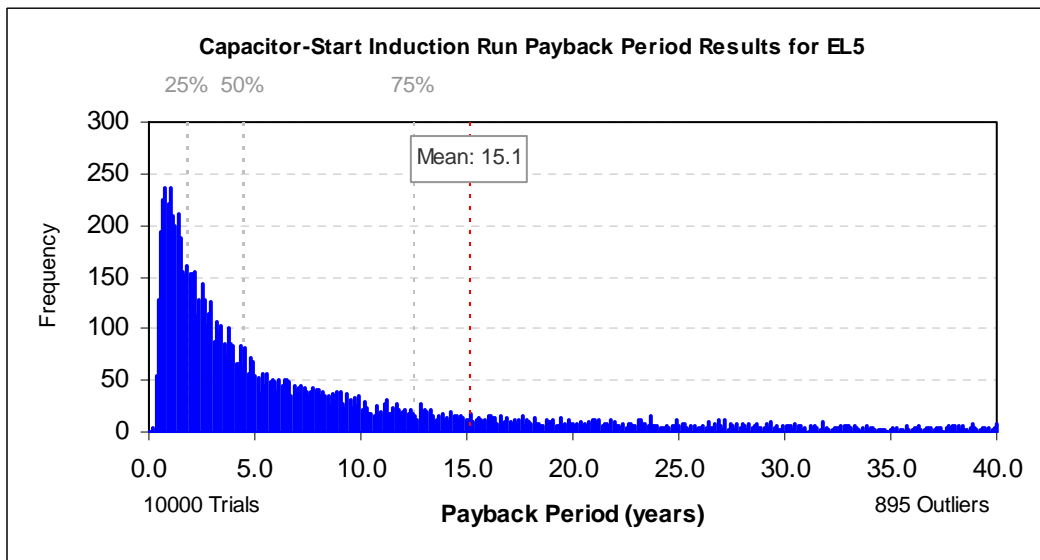
**Figure 8B.3.10 Capacitor-Start Induction Run Motors: Distribution of Payback Period Impacts for Efficiency Level 2**



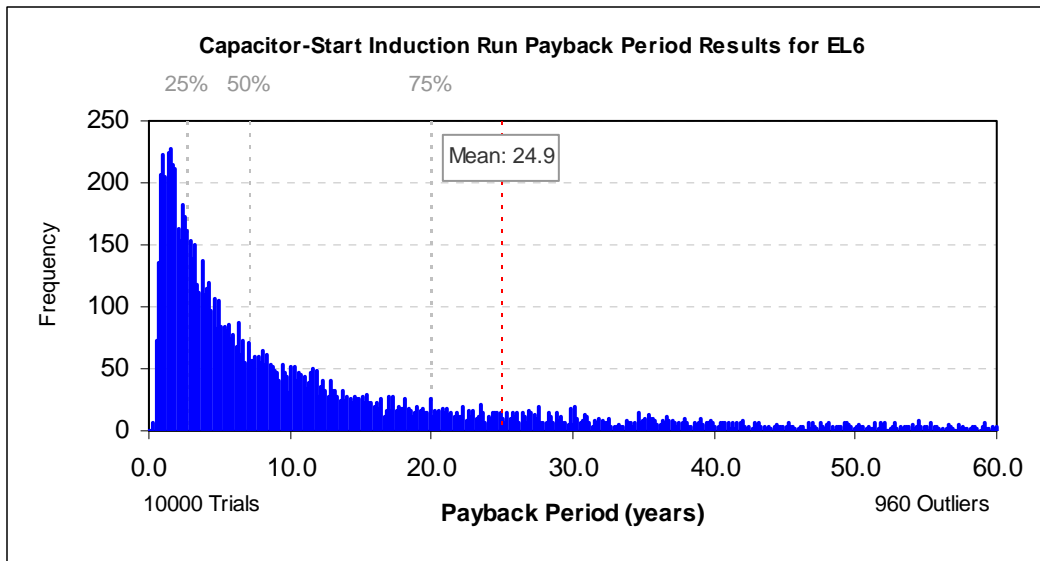
**Figure 8B.3.11 Capacitor-Start Induction Run Motors: Distribution of Payback Period Impacts for Efficiency Level 3**



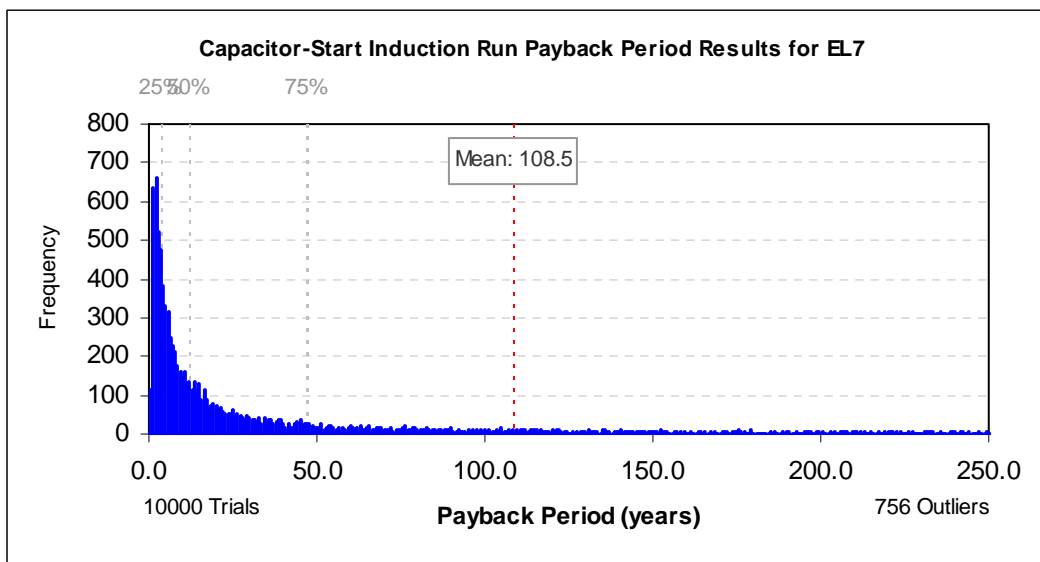
**Figure 8B.3.12 Capacitor-Start Induction Run Motors: Distribution of Payback Period Impacts for Efficiency Level 4**



**Figure 8B.3.13 Capacitor-Start Induction Run Motors: Distribution of Payback Period Impacts for Efficiency Level 5**



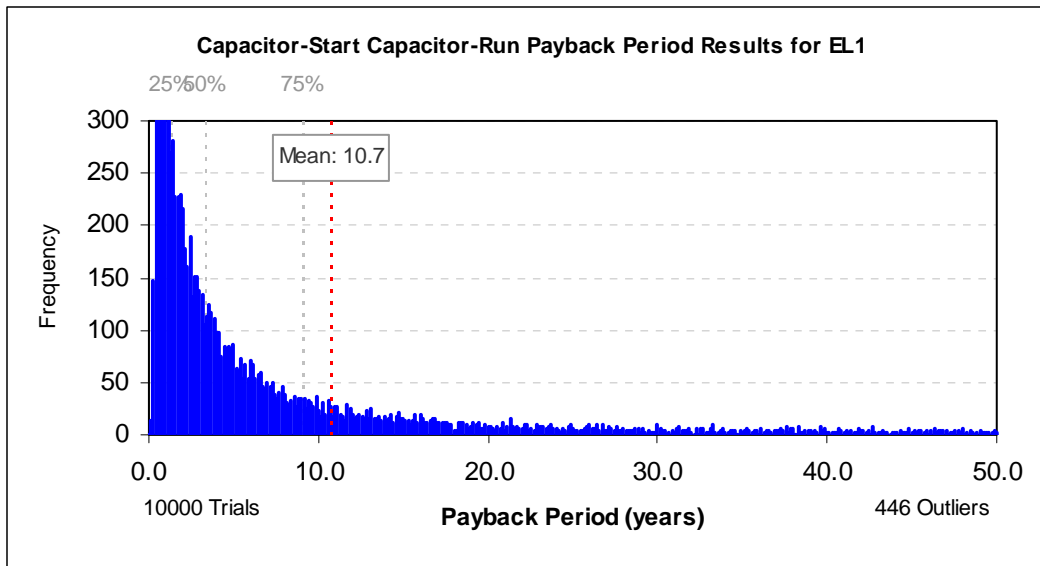
**Figure 8B.3.14 Capacitor-Start Induction Run Motors: Distribution of Payback Period Impacts for Efficiency Level 6**



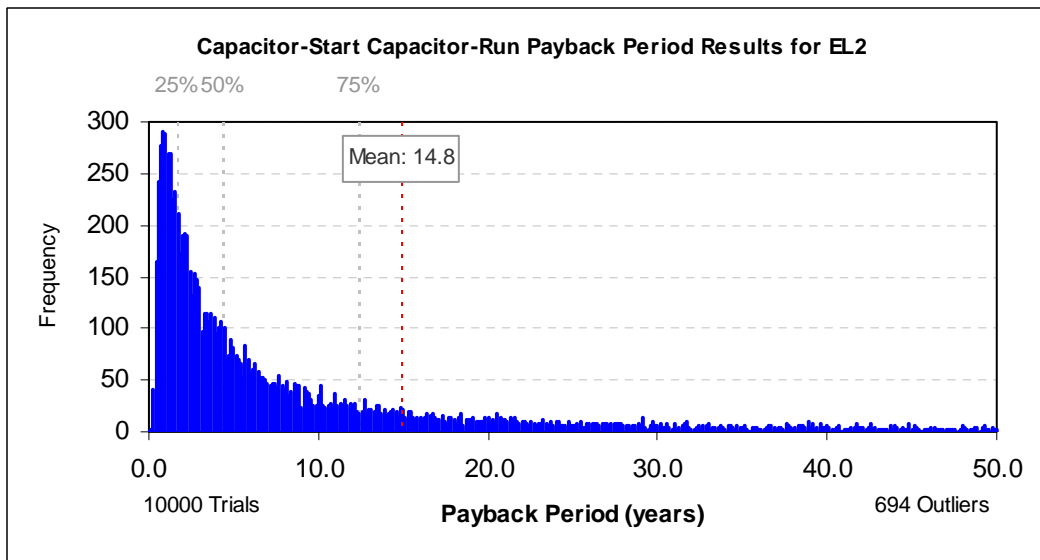
**Figure 8B.3.15 Capacitor-Start Induction Run Motors: Distribution of Payback Period Impacts for Efficiency Level 7**



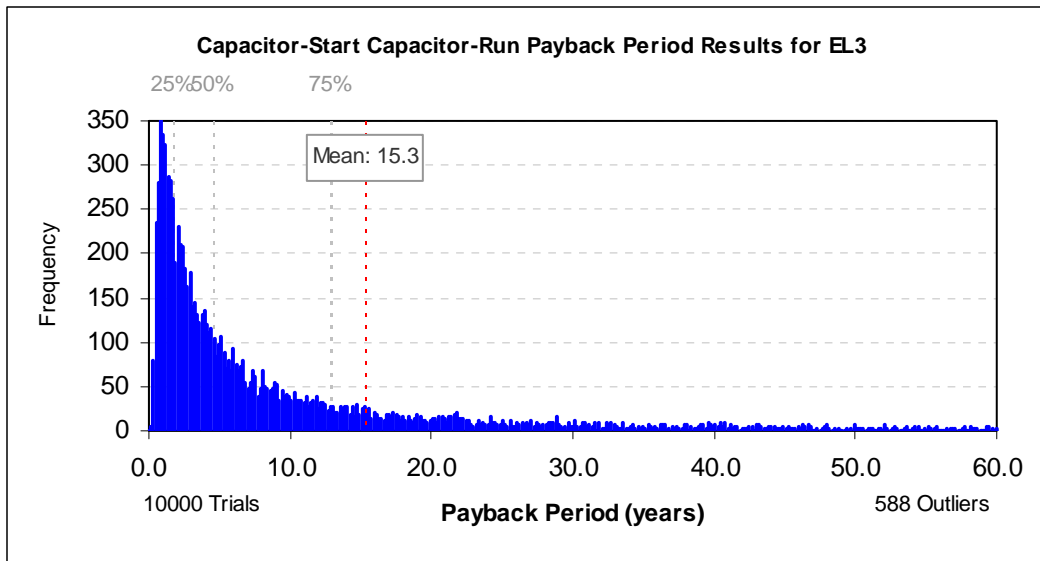
### 8B.3.3 Capacitor-Start Capacitor Run Motors



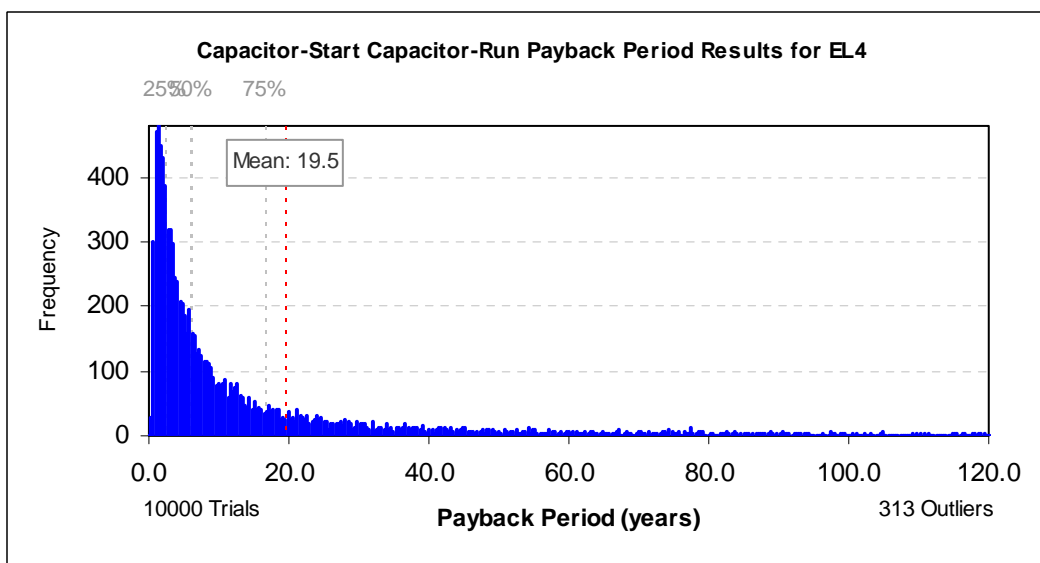
**Figure 8B.3.16** Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 1



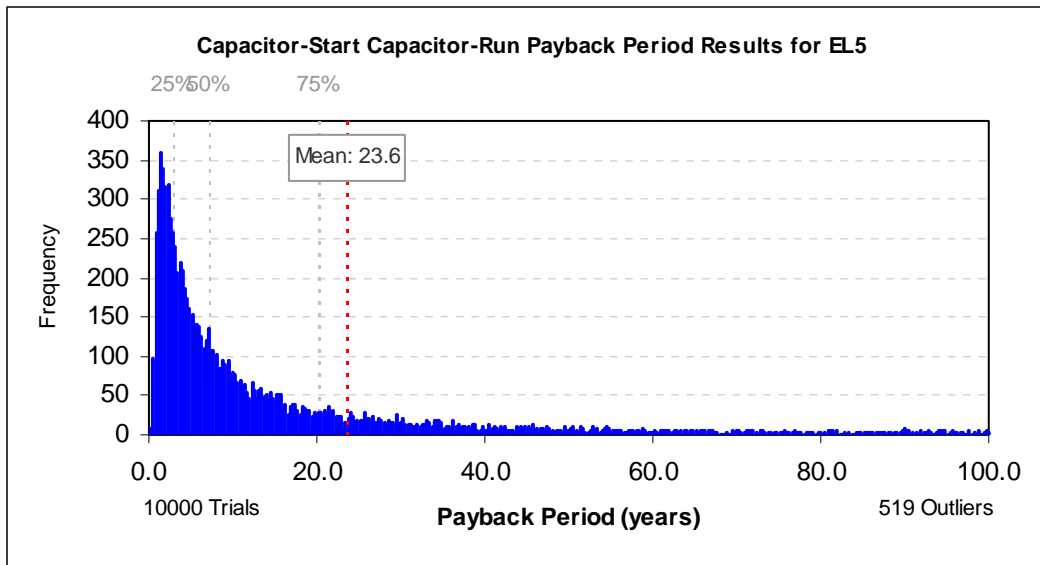
**Figure 8B.3.17** Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 2



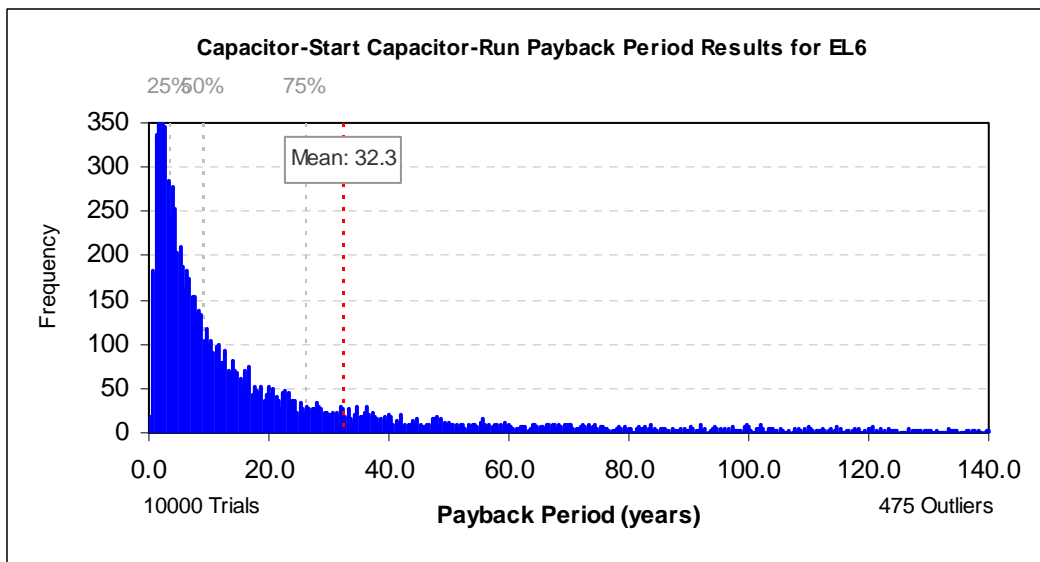
**Figure 8B.3.18 Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 3**



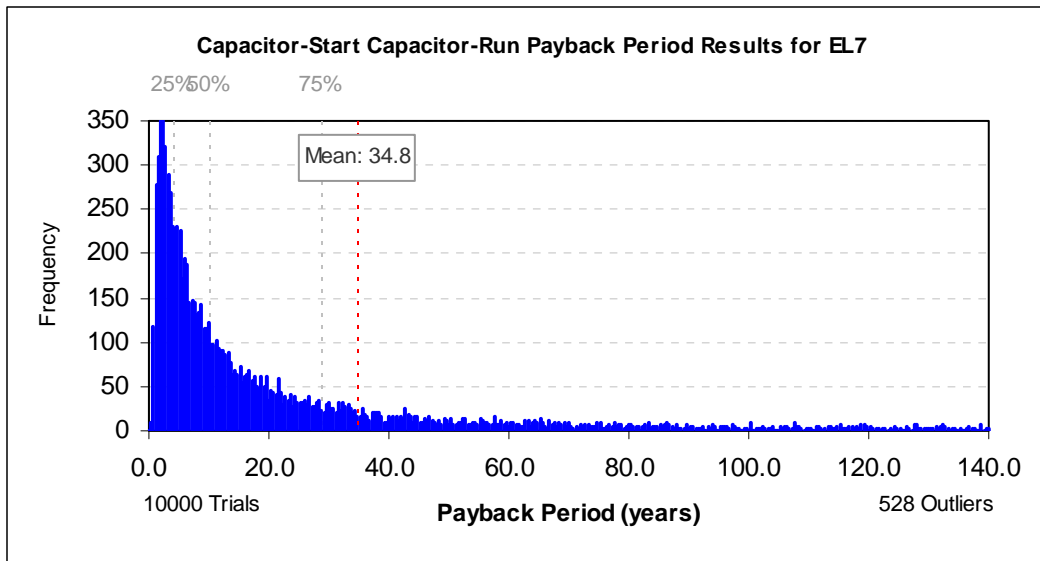
**Figure 8B.3.19 Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 4**



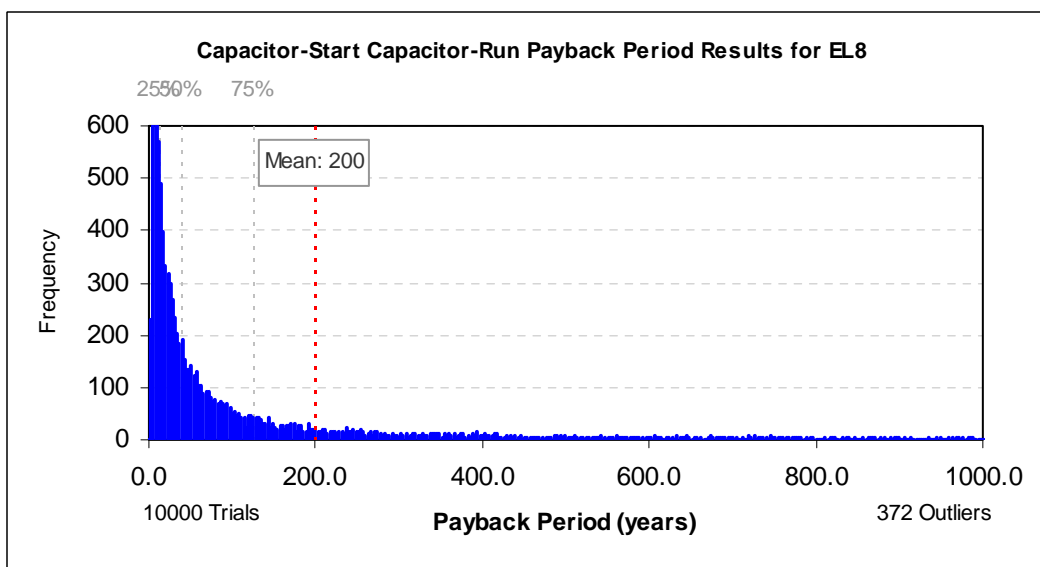
**Figure 8B.3.20 Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 5**



**Figure 8B.3.21 Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 6**



**Figure 8B.3.22 Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 7**



**Figure 8B.3.23 Capacitor-Start Capacitor Run Motors:  
Distribution of Payback Period Impacts for  
Efficiency Level 8**