



2024 Profile

of the Electrical Contractor

Topline Report by
Renaissance
Research & Consulting,
New York

August 2024

**2024 ELECTRICAL CONTRACTOR PROFILE STUDY
TOPLINE REPORT**

**PREPARED BY:
RENAISSANCE RESEARCH & CONSULTING INC.**

**PREPARED FOR:
ELECTRICAL CONTRACTOR MAGAZINE
WASHINGTON DC 20004**

AUGUST 2024

(8-7-24)

BACKGROUND and PURPOSE.....1

METHODOLOGY1

KEY FINDINGS4

DETAILED FINDINGS 11

▲ “WHO” ARE THE ELECTRICAL CONTRACTORS?..... 11

 Size of Firms11

 Revenue and Number of Employees13

 Change in Company Size During Past 12–18 Months14

 Change in Company Size (Cont.)15

 Change in Company Size (Cont.)16

 Other Firm Characteristics Including NECA Membership and Firm Administration17

 Firm Uses IBEW Labor18

 On-site vs. Office Workers19

 Special Designations20

 -- Requirements to Bid a Project.....22

 -- Separate Divisions23

 -- Employee Relations24

 -- Participation in Government Work25

 -- Length of Time Firm Has Been in Business26

 Age of Respondents28

 -- Length of Time Electrical Contractor Has Been in the Industry30

 Respondent Education.....31

 Level of Responsibility33

 Gender34

 Where Purchases are Made.....34

 Where Purchases are Made, cont.36

 Sources Used to Keep Abreast of Electrical Contractor Industry News, Problem-Solving Ideas and New Product Technology37

▲ TYPES OF WORK PERFORMED 40

 --Types of Work Performed in Previous Year40

 Low-Voltage: Firms’ Active Engagement in Systems Integration or Data Centers.....56

 Roles Played by Firm in Integrated Systems, cont.....57

▲ “WHERE” DO CONTRACTORS PERFORM THE WORK?..... 58

Number of States58

Types of Work: By Sector (New Construction vs. Modernization/Retrofit vs. Maintenance/Service/Repair)59

Work in Various Building Categories (Residential vs. CII and Nonbuilding)63

Types of Residential and CII Work Performed65

▲ "HOW" DO CONTRACTORS PERFORM THEIR WORK? 67

 Roles in Specification/Types of Project Delivery (Design-Build or Design-Assist)67

 Building Information Modeling (BIM)71

 Completeness and Correctness of Plans and Specifications73

 Role of Engineers Within Electrical Contracting Firms76

 Project Collaboration/Level of Influence78

 Brand Specification Options79

 Main Reasons for Original Brand Selection and Substitution81

 Top 3 Reasons for Original Brand Selection—Trended82

 Top 3 Reasons for Brand Substitution—Trended84

 Comparison of Main Reasons for Original Brand Selection vs. Substitution85

▲ TRAINING AND TOPICS OF INTEREST 88

 Will Take/Have Taken Training and What Was Studied88

BACKGROUND and PURPOSE

For more than 50 years, **ELECTRICAL CONTRACTOR** magazine has sponsored its exclusive “Profile of the Electrical Contractor.” This survey is conducted biannually among its subscribers and aims to provide the most complete “picture” of the contracting industry available from the electrical contractor’s point of view. The survey provides electrical contractors with an indication of where their business “fits” into the overall industry, while at the same time providing information that is used to guide and refine the magazine’s editorial content.

METHODOLOGY

The survey was conducted exclusively online among subscribers to **ELECTRICAL CONTRACTOR** magazine. In addition, over 100 members of the **ELECTRICAL CONTRACTOR** Subscriber Research Panel participated in the survey. The field period for the survey began on January 24, 2024, and ran through March 31, 2024. A total of 828 participants completed the survey in that time.

In the past, a paper copy of the survey had been mailed via the USPS to magazine subscribers for whom we did not have their permission to contact them by email. In 2024, as was the case in 2022, the survey was only offered on the internet as a result of the dwindling participation in previous years to the (“print”) mailed surveys. The online option was introduced in 2004.

Because we were not able to invite magazine subscribers on the “print” list through emails, we attempted to attract them to participate through the newsletter (with weekly mentions) and a small space advertisement in the February and March issues of the magazine. In that advertisement (sometimes repeated in the newsletter) we provided a web link to the survey using their subscriber number, which was then authenticated online.

Since there was no print sample, the data was not weighted. In the case of 2020, the last year for which there was a print sample, the proportion of the total attributable to the print list was so low, weighting would have distorted the total statistics.

For the first time, starting with the 2018 Profile, we also identified Subscriber Panel members who participated in the study as part of our email survey invitation and also separately solicited Panel members to participate in the Profile survey by mailing them a separate survey link. In total, 142 Panel members participated in the 2024 Profile Study. As was the case two years ago, in some instances, Panel members completed additional versions of the Profile survey in addition to the “core” questions and Version 5.

Each respondent who received the survey through the internet was sent up to seven follow-up emails. An incentive was offered for participation in the survey: For each completed survey, **ELECTRICAL CONTRACTOR** would contribute \$5 to charity, up to a total of \$10,000. In addition, the magazine also offered a sweepstakes drawing for a chance to win one of ten \$150 Amazon gift cards. Panel members were also entitled to be entered into the monthly Panel sweepstakes for completing the Profile survey.

This research was conducted by New York-based Renaissance Research & Consulting Inc. (www.renaiss.com), an independent marketing research firm that has, as one of its specialties, market research for the construction industry.

Additional recruiting was done through NECA, which resulted in a significantly higher number of NECA members in the sample than was the case two years ago. Since NECA firms tend to be larger, we checked the sample and noted where differences might be due to having more NECA members in the sample.

Statistics

The margin of error on the total sample of 828 is +/- 2.9% for percentages around 50%, (i.e., we are confident that a reported 50% will fall between 53% on the plus side and 47% on the minus side 90% of the time). Please note that different rules apply to testing of averages, which were also tested at the 90% level of confidence and are noted in the report.

A significant difference in the total sample between 2024 with a sample size of 828 and 2022 with a sample size of 843 is at least 4.0% at the 90% confidence level.

Bold text and an arrow in the charts indicate significant difference and the direction of the difference. A (+) or (-) next to the title indicates a significant difference compared to its pair.

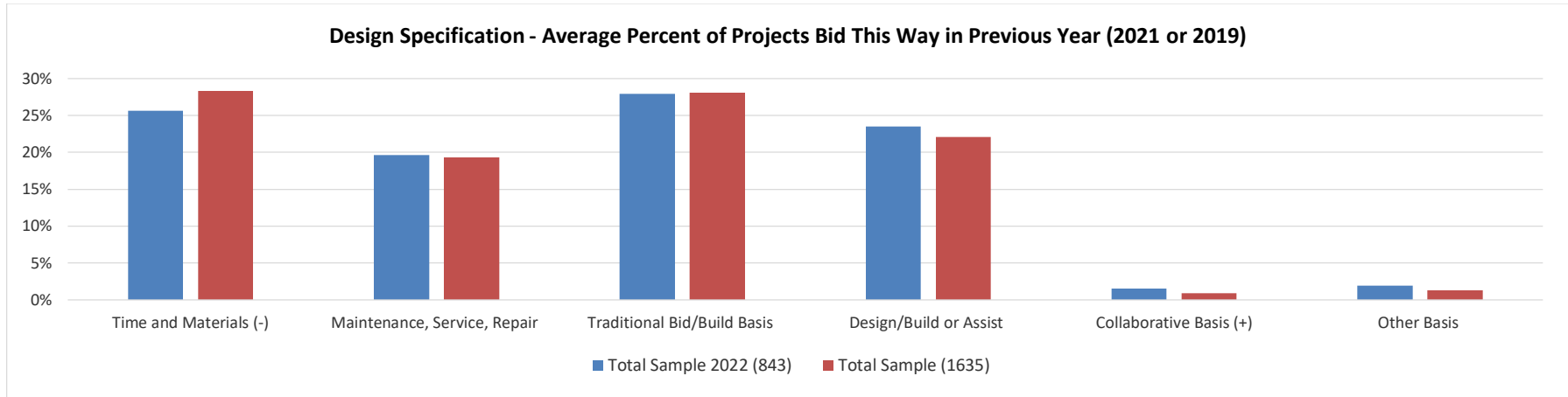
The report uses a few different graphics to indicate significant differences:

- In this example, the electrical contractors working in firms with 1-9 employees (column 'b') are significantly older than those who work in firms with 10+ employees.

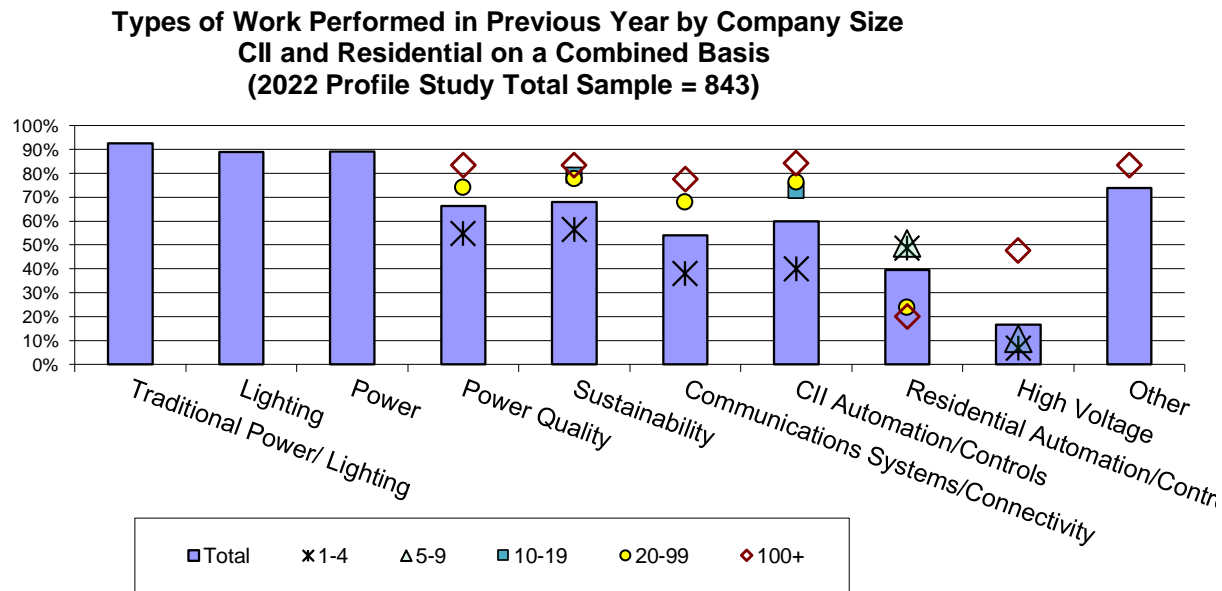
Average Age of Electrical Contractor in 2022 and Earlier (Q11)				
		Firm Size		
	Total	1-4	1-9	10+
		(a)	(b)	(c)
Average Age (2022 Study) N=843	59.3 (increase from 2020)	61.9 (increase from 2020)	61.2>c (increase from 2020)	56.9 (increase from 2020)
Average Age (2020 Study) N=1635	57.9	59.9	59.3 (decline from 2018) >c	55.2 (increase from 2018)
Average Age (2018 Study) N=1597	58.2	60.6	60.0 >c	53.8
Average Age (2016 Study) N=2419	57.3	58.7	58.5 >c	54.1
Average Age (2014 Study) N=2722	56.2	57.4	57.1 >c	53.3
Average Age (2012 Study) N=1024	56.1	57.5	57.2 >c	52.6
Average Age (2010 Study) N=1077	53	53.8	53.8 >c	50.4
Average Age (2008 Study) N=1157	51.2	52.6	52.1 >c	49.2

The **bolding** and the arrow indicate significant difference and the direction of the difference.

Alternatively, on a column or bar chart, a (+) or (-) next to the title indicates a significant difference compared to its pair. In this example from the current study, the average revenue from Design-Build or assist rose significantly vs. two years earlier.



How to read scatter plots: Subgroups that are shown above the blue bar are significantly larger than average, while those within the bar are smaller than average. Subgroups that are average are not shown.



KEY FINDINGS

The overall theme appears to be one of recovery and growth, starting with the growth in company size and revenue.

- Continuing a trend that we observed in 2020, electrical contracting firms have continued to get larger. As of the 2024 Profile Study, only a bare majority of firms are small, defined by the magazine as having 1-9 employees (51%) and/or revenue of \$1 million or less (42%).
- Compared to two years ago, the proportion of firms with 1-4 employees declined statistically significantly, while the proportion of firms with 10+ employees grew in total but not in any of the intermediate size breaks of 10-19, 20-99 and 100+ employees, with the exception of 50+ employees, which had posted a significant increase.
- The same thing happened in the case of revenue. Compared to two years ago, there are significantly *fewer* firms with revenue of under \$1 million and significantly *more* firms with revenue of over \$2.5 million—in total and at each of the revenue breaks—\$2.5 million to less than \$10 million, \$10 million to less than \$25 million and \$10 million or more.
 - The change in the *number of employees* versus two years ago is not due to there being more NECA members in the sample. In fact, it was non-NECA firms that had *fewer* 1-4 employee firms and more 10+ employee firms compared with two years ago. There was no change within NECA firms on the number of employees compared with two years ago.
 - Revenue went up within both NECA and non-NECA firms compared with two years ago. The main difference is that the percentage of firms with revenue over \$10 million also went up among NECA firms while there was no corresponding increase among non-NECA firms.
- As was the case two years ago, most firms that participated in the 2024 Profile Study reported that their firm stayed the same in terms of number of employees (56%). More than one quarter (28%) said that their firm *increased*, while about 15% reported a *decrease* in the number of employees during the past 18 months.
 - That is, about twice as many firms added employees as dropped them. Compared with two years ago, the percentage of firms that added employees increased, and the percentage that stayed the same decreased. The percentage of firms that reported a drop in employees was statistically unchanged.
 -
- Regardless of company size (number of employees), the survey respondents continue to be predominantly middle aged or older, rather than young. Across the total sample, only 3% are aged 18–34, 26% are between the ages of 35–54, 35% are aged 55–64, and 36% are aged 65+.
 - Compared with two years ago, the percentage of respondents aged 25–34 increased slightly but significantly from 1% to 3%, reversing the decline that we had reported two years ago. The proportion aged 35-54, 55-64 and 65+ are all unchanged compared with two years earlier. Nor

did the *average* age increase from two years ago.¹ This is one of the few instances that the average age of electrical contractors (58.6) did not increase. The last time the average age of electrical contractors in the survey did not get older was reported in 2020.

- Nevertheless, electrical contractors in larger firms of 10+ employees continue to be substantially and significantly younger on average (56.6 years old) compared with electrical contractors in firms with 1–9 employees (60.7 years old).
- 60% of the electrical contractors in this survey have some college education, statistically unchanged from two years ago.
 - Respondents in firms with 10+ employees are significantly more likely to hold a bachelor’s degree or higher (31% in firms with 10+ employees vs. 23% in firms with 1–9 employees).
- 5% of the electrical contractors who participated in this survey are women, statistically unchanged from 2022. As was the case two years ago, the female electrical contractors interviewed are less likely to work in very small firms (3% among firms with 1–4 employees) and/or with revenues of under \$250K (1%) or in the Northeast (1%).
- As a whole, electrical contractors continue to get more of their average revenue from CII, 55% on average, than from Residential projects, 35% on average. Nonbuilding projects (Transportation/Lighting and Utility) account for about 10% of the contractors’ business. Both CII and Nonbuilding account for more average revenue to the largest firms (100+ employees).
 - As of 2024, the average percentage of contractor revenue from Commercial and Single-Family Housing is about equal among the total sample (29%). This occurred even though neither category has posted a significant change since two years ago. However, average revenue from Single-family construction has been trending down since 2018 when it was 38.4%, while Commercial construction has consistently accounted for about 27% to 29% of average revenue.
 - Compared to two years ago, only three categories posted increases—Multifamily housing (6 + stories), Line Work and Electric Vehicle Charging Equipment—while nothing declined.
- As was also the case in the recent past, within the broad CII category, a greater percentage of electrical contractors’ revenue is from Commercial construction (29%) than from Industrial (15%) or Institutional projects (11%).
- Average revenue from new construction is up compared to two years ago (36.6% vs. 31.8%), while average revenue from Maintenance/Service and Repair posted a small, but significant decline (to 35.5% from 38.7%). The fact that average revenue from new construction has increased is another sign of economic strength. However, new construction has not recovered to the level reported in the 2008 Profile Study (43% in 2007).

¹ NECA vs. non-NECA: The average age is statistically younger among NECA firms and declined compared with two years ago (from 58 to 55.3). Among non-NECA firms, the average age held statistically unchanged at 60 compared with two years earlier, but did not increase.

- The increase in the new construction average revenue is attributable to non-NECA firms whose average revenue from new construction posted a significant increase from 30% to 35%. NECA firms were statistically unchanged on this measure.

At the same time that average revenue from new construction is up, the types of work performed is quite consistent with what we reported in 2022.

When asked about the types of work performed in the previous year (regardless of whether Residential or CII), almost all firms worked on Traditional Power and Lighting (94%). Note that there is a great deal of overlap within this category: 90% worked on Lighting and essentially the same percentage, 91%, worked on Power.

- About three-quarters (77%) worked on at least one aspect of Automation/Controls: about 60% worked on CII Automation/Controls*, and about 40% worked on Residential Automation/Controls.
- Three-quarters (75%) worked on various aspects of a category called “Other” (which includes Any Electrical Maintenance/Service/Repair, HVAC Mechanical, Preassembly/Prefabrication of Electrical Components and/or Water Utilities or Wastewater Treatment Plants).
- About 7 in 10 worked on Sustainability (71%) and/or Power Quality (71%).
 - Power Quality was the only category to post an increase compared with two years ago. None of the categories posted a decline. This is in contrast to 2022, when a number of the categories had a reported two-year decline (not shown).
- 55% worked on Communications Systems/Connectivity.
- About 2 in 10 worked on a relatively newly added category called High-Voltage.
- Among the total sample, as noted above, only Power Quality as a **category**—but not the individual components including Backup Power/UPS, Troubleshooting/Maintenance of Low-voltage systems, TVSS/Lightning Surge Suppression and Energy Management/Power Quality—posted an increase compared with two years earlier.
 - The *individual* project types that posted increases included Electric Vehicle Charging Equipment, LEED Projects, Smart Grid Technology, Daylighting/Shading Systems, Home Automation/Smart Home/Connectivity and Preassembly/Prefabrication of Electrical Components.
 - As such, the 2024 Profile Study brought more evidence that electrical contractors are continuing to move away from standard power and wiring to high(er) tech and more value-added areas such as Lighting and Industrial Systems/Controls.

In another sign of recovery, in the case of both CII and residential work, the few changes that occurred tended to be increases rather than losses.

The previous section deals with whether electrical contractors report doing “any” of a particular type of work. This next section deals with average *revenue*. Electrical contractors were given a list of 14 project types and were asked how much of their revenue came from each of these sources. This was the question that showed the dramatic shift away from Electric Power Transmission and Distribution to higher-value categories such as Lighting in 2016.

- In 2024, the top three categories based on average revenue are Lighting Ballasts, Controls, Fixtures, Lamps (25.2%); Electric Power Transmission and Distribution (24%); and Industrial Systems (10.8%).
- In the most recent wave, only Industrial Systems changed from two years earlier, posting a significant increase from 7.8% to 10.8%.
- Among the total sample, use of BIM (Building Information Modeling) was statistically up from the levels observed in 2022 in terms of both average and “any” use. Across the total sample, about 36% of firms say that they use BIM, (“any” up from 31% two years earlier). On average, BIM use is now at 12.3%, up from the average of 9.2% measured in 2022. Use of BIM increases with company size, rising to 81% “any” use and 34% average use among firms with 100+ employees (statistically unchanged compared with two years earlier).
- Given this list of high-tech project types and approaches (such as BIM), it should not be surprising that 59% of electrical contracting firms continue to have a professional relationship with an engineer, statistically unchanged from two years ago. Although these relationships are more prevalent among larger firms—80% among firms with 10+ employees vs. 40% of firms with 1-9 employees, even 37% of firms with 1-4 employees report working with engineers.
- Continuing a story we reported in 2020, in 2024 the way that electrical contractors bid jobs is remarkably consistent: Time and Materials, and Maintenance, Service and Repair—both added in the 2020 Profile Study, based on their high number of volunteered mentions in 2018—were once again, mentioned most often on an *any* use basis (76% and 75%, respectively). Traditional Bid-Build, mentioned by 65% and Design-Build or Assist, mentioned by 62%, form a second tier. On a Collaborative Basis or Other received the least mentions at 13% and 3%, respectively.
- Compared with two years earlier, Time and Materials accounts for slightly but significantly less average revenue, while Collaborative basis accounts for more average revenue (on a much smaller base).
- In terms of average revenue (which adds to 100%), the top three design specifications are Traditional Bid-Build (28%), Design-Build or Design-Assist (25%) and Time and Materials (23%). Maintenance, Service and Repair (on a combined basis) accounts for an average of about 20%. Only about 4% of projects were bid on a Collaborative basis or on some other basis in 2023.

Electrical contractors continue to have wide discretion to influence brand choice.

- As has been the case in recent Profile Studies, about three-quarters of electrical contractors report having a “high” or “medium” ability to influence the overall electrical design or specifications with building owners and/or design team members.
- The breakdown to two years ago is comparable—42% have a “high” level of influence and 35% have a “medium” level of influence.
 - There are no statistically significant differences compared with two years earlier, either among the total sample or among firms with 1-9 or 10+ employees.
- About 8 in 10 electrical contracting firms say that they receive incomplete plans and specs and/or incorrect plans and specs, both of which afford the electrical contractor the opportunity to influence the project and its specifications.
 - In fact, from a separate set of questions, respondents were asked how much discretion they have in original brand selection or in making a brand substitution. Overall, contractors are able to make brand selections about 65% of the time—69% in the case of firms with 1–9 employees and 61% in the case of firms with 10+ employees. These percentages are consistent with what had been reported two years ago.
- Availability and Price continue to top the list of reasons for original brand selection and/or substitution. In fact, Availability scores even higher in the case of brand substitution than in the case of original brand selection (91% vs. 80%). Price is essentially the same at 67% and 62% for original brand selection and for substitution. Compatibility with existing systems has been consistently in a distant third place (35% in the case of original brand selection and 46% in the case of brand substitution).

Electrical contractors’ influence extends to where they made purchases and there has been a marked shift from what we have observed in the past:

- Specifically, the average percentage of electrical contractor purchases that are made at Electrical Distributors posted a large and significant drop from 65% to 48%. The percentage reporting purchases at Retailers (including Big Box Stores and Local Hardware Stores), 10%, is not directly comparable to what was asked in 2022, because in 2024 we broadened this category to also include Local Hardware Stores. Nevertheless, it is surprising that a broadened category showed a decline.
 - Survey takers were possibly making a distinction between what they identified as brick and mortar outlets (Electrical Distributors and Retailers) and sources that were explicitly identified online sources, all of which posted significant increases.
- The decline in average spending at Electrical Distributors was attributable to non-NECA firms, whose average purchase declined from 62% in 2022 to 42% in 2024. NECA firms were statistically unchanged on average spending at Distributors.

Electrical contractors were asked which sources they use to keep abreast of electrical contractor industry news, problem-solving ideas, and new technology. The list included media and nonmedia sources such as vendors (distributors and retailers), seminars, webinars and word-of-mouth.

- Trade Magazines continue to be chosen the most often, by far (78% of the total sample). In contrast, Social Media (26%), Retailers (23%) and Podcasts (10%) scored substantially lower on this measure.
- As was the case two years ago, Trade Magazine results are equally strong among both small and large firms. As was also the case two years ago, all of the other sources scored lower than Trade Magazines with the 35–54 age group. In fact, there is a 36-point difference between Trade Magazines and Social Media, even among electrical contractors aged 35-54. The gap is even higher among electrical contractors aged 55+.
 - Compared to two years ago, there appears to be a shift to online sources from print, and that manufacturer’s catalogs are relied on less whether they are offered in print or online.
 - Increased: Trade magazine or industry *websites*, search engines, social media, podcasts
 - Decreased: Trade magazines, manufacturer websites or online catalogs, manufacturers’ print catalogs, retailers

Training

About 85% of electrical contractors say that they, or someone in their firm, has taken training in the past 12 months or plan to take training in the next 12 months to improve or broaden skills for certification. This training could be in the form of online, correspondence or classroom training. There is no statistically significant difference between the percentages that took training (85%) vs. those who plan to take training (86%). Further, there is no change in the percent taking training or planning to take training versus two years ago.

Because of the pandemic, in 2022, we asked about whether the training was or will be “hybrid” (a combination of online and in-person methods). Regardless of whether they participated in hybrid training or not, we asked if they thought the hybrid approach would continue into the future.

- As was the case two years ago, about one-half (52%) has already taken or will take hybrid training. 72% think that the hybrid approach will continue into the future. This is essentially unchanged compared to two years earlier.

The courses receiving the most mentions are Safety (Electrical/Personal/On-site/Job site) at 64%, Personnel/Leadership at 51%, and *National Electrical Code (NEC)* usage and/or changes at 50%.

Interest in most of the individual courses is statistically unchanged compared to two years ago.

- The main differences are that significantly more electrical contractors are interested in topics involved with business management rather than technical skills: OSHA Compliance (39%), Estimating (35%), Developing New Business (22%) and Financial Management (14%). Interest in

courses on Prefabrication/Off-site Building, a technical topic, also posted a statistically significant increase to 12%.

There was a strong and statistically significant increase in the percentage of respondents who mentioned having taken or will take three or more courses (83%). An impressive 59% mentioned six or more courses, statistically unchanged from two years earlier.

Administration

Starting in the 2020 Profile Study, we asked a number of questions about administration. In 2024, we learned that:

- There continues to be a very consistent split of approximately 80/20 between the average percentage of the workforce that is considered on-site electrical workers vs. the average for being considered primarily business/office workers.
- Safety continues to be a key factor in the bid process: Across the total sample, 48% say that they are required to have a prequalified standards and safety program in order to bid on a project. (72% in the case of firms with 10+ employees vs. 24% of firms with 1–9 employees.) The results among the total sample and firms with 10+ employees are statistically unchanged, while significantly fewer firms with 1–9 employees mentioned this requirement in 2024 than in 2022.
 - Nevertheless, about 6 in 10 firms (65%, unchanged from two years ago) say that they already have a certified safety program or that they plan to institute one in 2024. Having a certified safety plan increases steadily with company size (from 35% among firms with 1–4 employees and up to 94% among firms with 100+ employees).
- More than one-half of firms (57%) have worked on government projects since 2022; 55% said that they expect to work on government projects in 2024.
 - Regardless of the time frame of the work, more of the participation is closer to home, that is, work for local entities > state > federal projects.
 - Once again, larger firms are far more likely to perform government work (about 73% among firms with 10+ employees vs. about 40% to 42% among firms with 1–9 employees).

Note that the difference between smaller and larger companies is even more pronounced in the cases of state and federal work. Specifically, larger firms are about twice as likely to have or plan to do local work, but are about four times more likely to have or plan to do state work and about six times more likely to have done federal work than smaller firms.

DETAILED FINDINGS

▲“WHO” ARE THE ELECTRICAL CONTRACTORS?

Size of Firms

As was the case two years ago, a bare majority of the electrical contractors interviewed continue to work for small firms in terms of both their number of employees and their revenue: 51% have between 1 and 9 employees (down substantially and statistically significantly from 56% two years ago). However, only 42% have annual revenues of less than \$1 million (down from the 50% reported in the 2022 Profile Study).²

- Consistent with this, in 2024, a significantly higher percentage of the total was made up of larger firms (49% of firms now have 10+ employees vs. 44% in 2022, 34% in 2020 and 29% in 2018, and 39% of firms now have annual revenue of more than \$1 million compared with 31% in 2020 and 27% reported in the 2018 Profile Study).

A decline in the percentage of smaller firms also took place between 2014 and 2016, but then stabilized as of the 2018 Profile Study. (The 2018 results are not shown.)

- As shown on the next page, there are significantly fewer firms with 1–4 employees and more firms with 10+ employees—10+ in total, but no significant changes for any of the intermediate breaks of (10–19, 20–99 or 100+) with the exception of firms with 50+ employees in 2024 compared with 2022. Also on the next page, there are significantly fewer firms with revenue of under \$1 million (42% vs. 50% two years ago) and more firms with revenue of over \$2.5 million—in total and at each of the revenue breaks—\$2.5 million to less than \$10 million, \$10 million to less than \$25 million and \$10 million or more.
 - The change in the *number of employees* versus two years ago is not due to there being more NECA members in the sample. In fact, it was non-NECA firms that had *fewer* 1–4 employee firms and more 10+ employee firms compared with two years ago. There was no change within NECA firms on the number of employees compared with two years ago. (Not shown.)
 - Revenue went up within both NECA and non-NECA firms compared with two years ago. The main difference is that the percentage of firms with revenue over \$10 million also went up among NECA firms while there was no corresponding increase among non-NECA firms. (Not shown.)

Table 4, Q2A //Table 6, Q3

² Note that some of the higher revenue may be due to a higher percentage of NECA firms in this study compared with two years ago.

**Company Size Trended 2024 Profile vs. 2022 Profile
(Reporting on Previous Year) _Q2A and Q3**

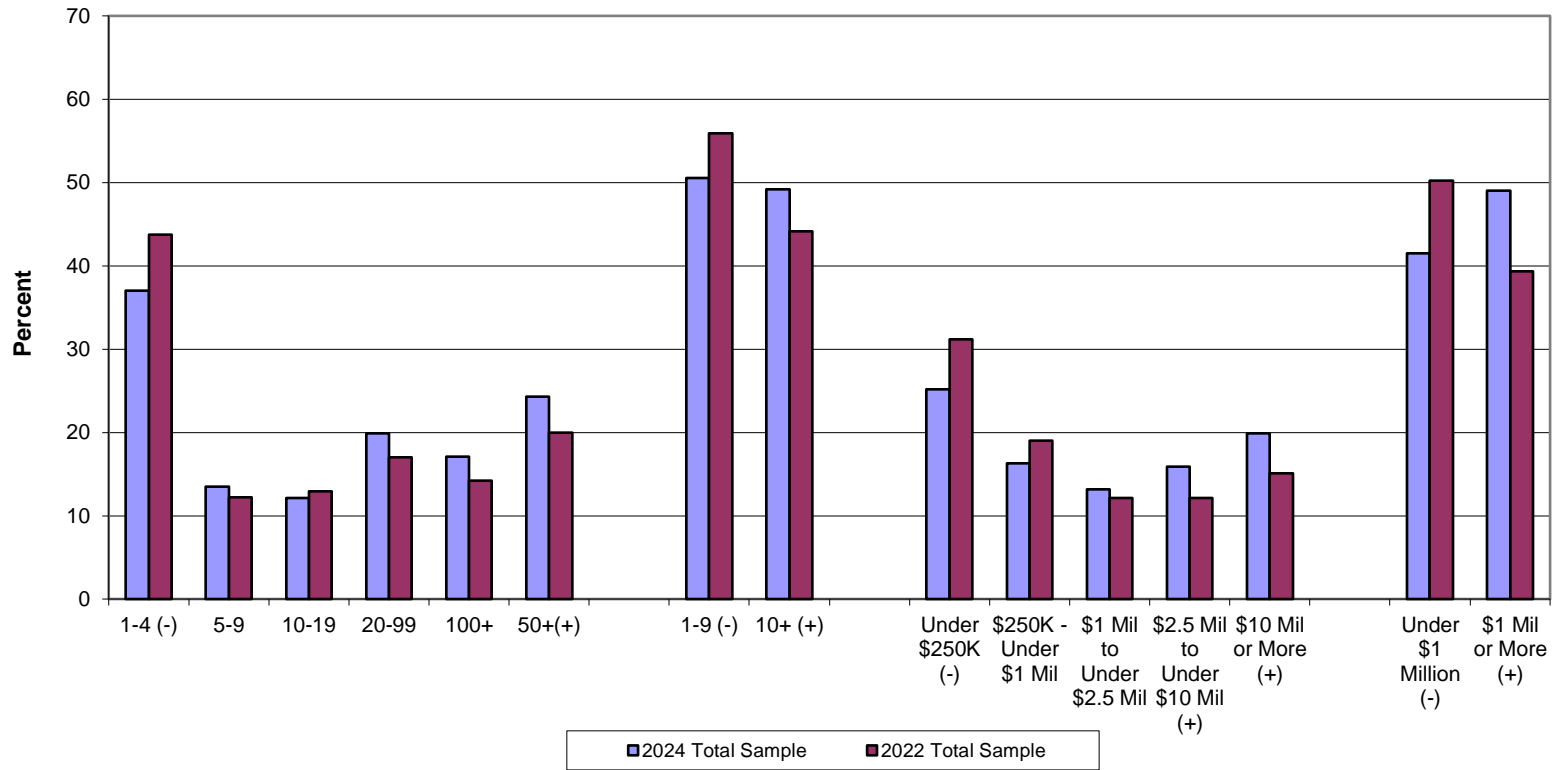


Table 4-1, Q2A //Table 6-1, Q3

(+) or (-) next to the title indicates a significant difference compared to its pair

Revenue and Number of Employees

The subgroups are shown for context only and have not been significance tested. This is because we have a concern that the question may have been misinterpreted or misunderstood. Otherwise, it is difficult to explain, for example, how a how firm with 100+ employees could have a yearly revenue of less than \$1 million.

Firm Revenue by Number of Employees												
2024 Profile Study vs. 2022 Profile Study (Reporting on Previous Year) (Q3)												
	Total		1-4		5-9		10-19		20-99		100+	
	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022
	(828)	(843)	(306)	(368)	(112)	(103)	(100)	(109)	(165)	(143)	(142)	(120)
	%	%	%	%	%	%	%	%	%	%	%	%
Less than \$1 Million	42<	50	86	88	54	58	14	26	3	6	1	1
Less than \$250K	25<	31	64	67	9	10	3	4	1	1	0	0
Between \$250K and <\$1 Million	16	19	23	21	45	49	11	22	2	6	1	1
\$ 1 Million or More	49>	39	2	2	39	34	79	63	94	86	85	80
Between \$1 Million and <\$2.5 Million	13	12	2	2	36	30	46	47	9	9	3	0
Between \$2.5 Million and <\$10 Million	16>	12	0	0	3	4	33	16	53	48	6	9
Between \$10 Million and <\$25 Million	9>	6	0	0	1	0	0	1	30	25	14	14
\$25 Million+	12>	9	0	0	0	0	0	0	3	4	63	57
Don't Know/No Answer	9	11	12	10	7	8	7	11	3	8	14	19

Table 6

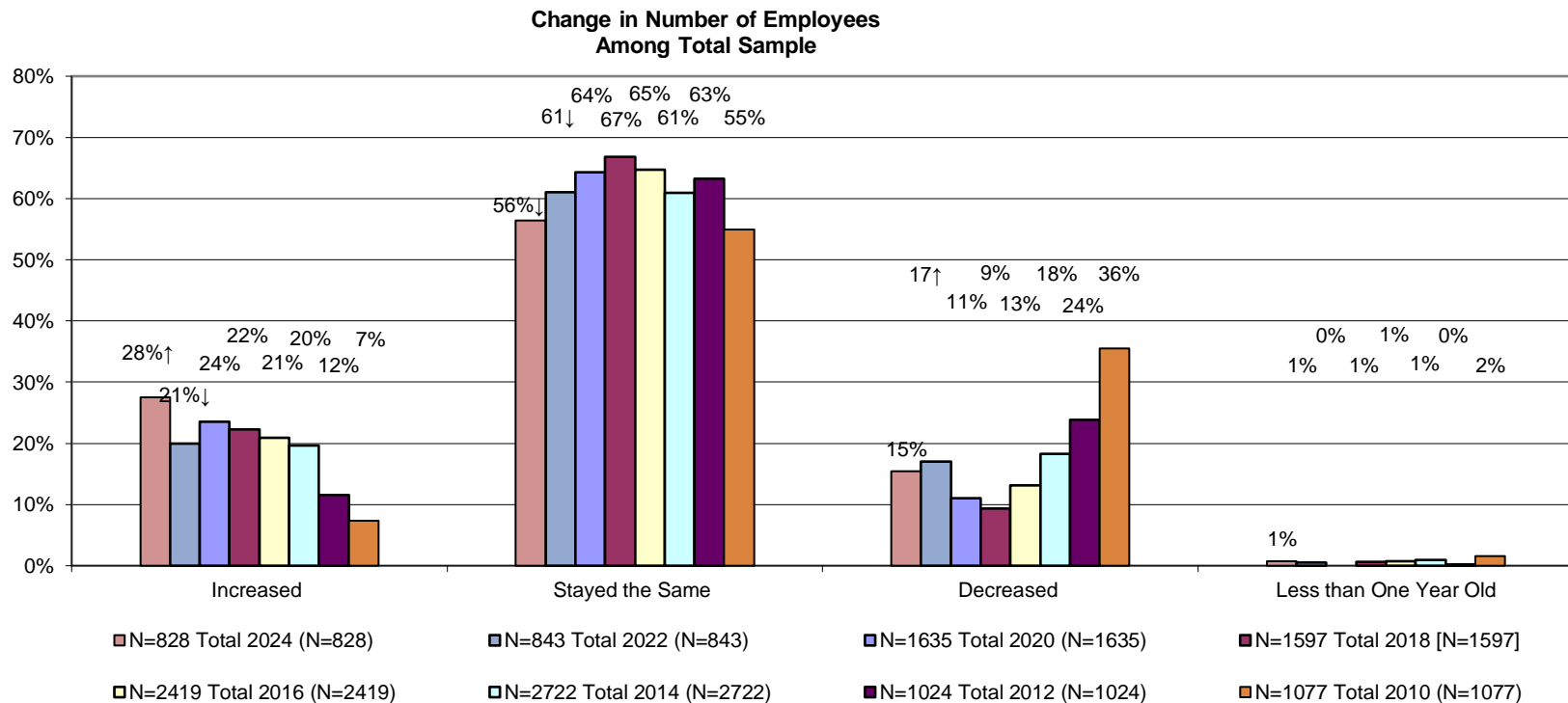
< Indicates a significant difference at the 90% level of confidence among the total sample

Change in Company Size During Past 12-18 Months

As was the case two years ago, most firms that participated in the 2024 Profile Study reported that their firm stayed the same in terms of number of employees (56%). More than one quarter said that their firm *increased*, while about 15% reported a *decrease* in the number of employees during the past 18 months.

Across the total sample, compared to two years ago, more firms increased while fewer reported staying the same size. The number of firms that decreased in size is statistically unchanged compared to two years ago.

- What is outside the scope of this study is the extent to which some electrical contracting companies may have gone out of business and thus were not in a position to participate in this study to report their status.



The symbols ↓ ↑ indicate significant changes at the 90% level of confidence vs. two years earlier

Change in Company Size (Cont.)

- A majority of firms stayed the same (56%)
- About twice as many firms added employees (28%) as lost employees (15%)
- More firms increased; fewer firms stayed the same
 - However, the percentage of firms losing employees was **nothing like the 2010 Profile when 36% reported losing employees**

Change in Company Size During Past 12 - 18 Months 2024_Q2B								
	Total Sample							
Q2B, Table 5	2024	2022	2020	2018	2016	2014	2012	2010
	(828)	(843)	(1635)	(1597)	(2419)	(2722)	(1024)	(1077)
Increased	28%>	20%	<24%=	22%	21%	20%>	12%>	7%
Stayed the Same	56%	<61%	<64% =	67%	65%>	61%=	63%>	55%
Decreased	15%	17%>	11%=	9%	<13%	<18%	<24%	<36%

- Far fewer firms with 1-9 employees gained staff (8%) compared with the 47% of larger firms that added employees between 2022 and 2024.

Change in Company Size During Past 12 - 18 Months 2024_Q2B

	1-9 Employees								10+ Employees							
	2024	2022	2020	2018	2016	2014	2012	2010	2024	2022	2020	2018	2016	2014	2012	2010
	(418)	(471)	(1075)	(1122)	(1744)	(2039)	(759)	(780)	(407)	(372)	(558)	(469)	(665)	(668)	(258)	(285)
Increased	8%	7%	<10%	10%	11%	12%>	6%=	5%	47%>	36%<	49%=	53%>	47%>	42%>	27%>	15%
Stayed the Same	75%	76%	78%	80%>	75%>	70%=	72%>	67%	37%	42%=	38%=	36% =	38%	35%=	37%>	23%
Decreased	14%	14%>	10%	9%	<12%	<17%	<20%	<26%	16%	<21%>	13%>	10%	<15%	<23%	<35%	<61%

Bolded numbers > and < indicate statistically significant differences in the direction of the arrow

Table 5

Change in Company Size (Cont.)

As shown below, the higher percentage of firms that increased from two years ago is attributable to the increase among NECA firms. There is no statistically significant changes among non-NECA firms.

	Total		NECA		Non-NECA	
	2024	2022	2024	2022	2024	2022
Total Answered	(828)	(827)	(242)	(199)	(585)	(628)
Increased	28 >	21	47 >	35	20	16
Stayed the Same	56	62	39	<47	64	66
Decreased	15	17	14	18	15	17

Table 5

Other Firm Characteristics Including NECA Membership and Firm Administration

(NECA Membership, Use of IBEW Labor, Percent of Workforce that is Business/Office Worker vs. On-site Electrical Workers, Requirements to Bid on a Project, Business Development and Number of Years in Business, Difficulty Finding and Retaining Skilled Workers)

- 29% of firms in this survey are NECA members, a statistically significant increase from the 24% in 2022 and the 18% reported in the 2020 Profile Study. As noted in the past, NECA membership skews to larger firms. As was the case two and four years ago, NECA membership is significantly higher among firms with 20+ employees (rather than 10+ employees as was the case in 2018).
- NECA membership is 12% among firms with 1–9 employees but 47% among firms with 10+ employees. Further, as shown below, membership likelihood increases with company size:
 - NECA membership is 28% among firms with 10–19 employees, 44% among firms with 20–99 employees and 64% among firms with 100+ employees.

Firm is a NECA Member 2024_Q10A

	Number of Employees							
	Total	1-4	5-9	1-9	10+	10-19	20-99	100+
	(828)	(306)	(112)	(418)	(407)	(100)	(165)	(142)
Yes, Firm is a NECA Member Table 56	29	8	<24	12	<47	28	<44	<64

- As noted above, compared with two years ago, NECA membership rose among the total sample. As shown below, it posted significant increases among firms with 5–9 employees (24% from 19% in the 2022 Profile Study report) and among firms with 100+ employees (to 64% from 54% two years ago).

Firm is a NECA Member – Trended_Q10A

	Number of Employees															
	Total		1-4		5-9		1-9		10+		10-19		20-99		100+	
	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022
	(827)	(843)	(306)	(368)	(112)	(103)	(418)	(471)	(407)	(372)	(100)	(109)	(165)	(143)	(142)	(120)
Yes, Firm is a NECA Member Table 56	29>	24	8	7	24>	19	12	10	47>	42	28	26	44	45	64>	54

Firm Uses IBEW Labor

- About one quarter of electrical contracting firms interviewed make use of IBEW labor.
- Use of IBEW labor rises with the number of employees.
 - Note that 21% of firms with 5–9 employees make use of IBEW compared to only 9% of firms with 1–4 employees.
- Use of IBEW labor is also strongly correlated with NECA membership: fully 72% of NECA member firms make use of IBEW labor compared with only 9% of non-NECA firms (not shown).

Firm Uses IBEW Labor -2024 (Q10B)								
	Number of Employees							
	Total	1-4	5-9	1-9	10+	10-19	20-99	100+
	(828)	(306)	(112)	(418)	(407)	(100)	(165)	(142)
	%	%	%	%	%	%	%	%
Yes	28	9	<21	12	<44	25	<38	<64

Table 57

< Indicates a significant difference at the 90% level of confidence in the direction of the arrow

- Use of IBEW labor is unchanged compared with two years ago in the total sample and among the employee sizesubgroups . Compared with two years ago, use of IBEW labor is statistically unchanged among NECA firms, around 72% both years (not shown) . .

Firm Uses IBEW Labor Trended (Q10B)																	
		Number of Employees															
		Total		1-4		5-9		1-9		10+		10-19		20-99		100+	
		2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022
		(827)	(843)	(306)	(368)	(112)	(103)	(418)	(471)	(406)	(372)	(99)	(109)	(165)	(143)	(142)	(120)
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Yes		28	25	9	8	21	20	12	10	44	43	25	24	38	41	63	63

Table 57

< Indicates a significant difference at the 90% level of confidence in the direction of the arrow

On-site vs. Office Workers

- There continues to be a very consistent approximately 80/20 split between the average percentage of the workforce that is considered on-site electrical workers vs. the average for being considered primarily business/office workers. (The actual split is 79%/21% and is consistent across subgroups). This question was asked of the 603 firms that have more than 3 employees. [Q10C, Tables 58 and 59]
 - There are no statistically significant differences in total or by subgroup in the 2024 Profile Study compared with two years earlier.

Special Designations

The vast majority of firms (82%) do not claim/qualify for any of the designations listed below. Further, the vast majority of firms that do qualify (18%) qualify for only a *single* designation. As shown on page 24, the low percentage of qualifying firms may negatively affect some firms as a higher percentage of electrical contractors (25% total, up to 56% for larger firms) say that they encounter **Female/Minority/Veteran man-hour workforce requirements in order to bid a job.**

- As was the case two years ago, two company size groups—those with 5-9 (vs. firms with 1-4 employees) and those with 20-99 (vs. firms with 100+ employees)—are more likely to report qualification in one or more of these designations.

Firm Qualifies for Any of These Designations – 2024 Q10F								
	Number of Employees							
	Total	1-4	5-9	1-9	10+	10-19	20-99	100+
	(828)	(306)	(112)	(418)	(407)	(100)	(165)	(142)
	%	%	%	%	%	%	%	%
Any Designation	18	12	<23	15	<21	23	24>	17
Minority-Owned Business (MBE)								
Yes	9	9	13	10	9	11	8	9
Women-Owned Business (WBE)								
Yes	9	3	<13	6	<12	12	15>	9
Disabled Veterans Business (DBVE)								
Yes	3	1	<6	2	4	5	3	4
Hubzone								
Yes	2	0	<4	1	2	3	1	1
Number of Designations: Only 1								
Only 1	14	11	<14	12	<17	15	20	14
Number of Designations: 2+								
2+	4	1	<9	3	4	8>	4	3

Table 62

- There are no statistically significant differences among the total sample compared with two years ago.

Firm Qualifies for Any of These Designations –Trended_(Q10F)																
	Number of Employees															
	Total		1-4		5-9		1-9		10+		10-19		20-99		100+	
	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2020
	827	827	306	360	112	99	418	459	406	368	99	107	165	143	142	(120)
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Any Designation	18	17	12	13	23	26	15	15	21	19	23	21	24	22	17	13
Minority-Owned Business (MBE)																
Yes	9	9	9	8	13	11	10	8	9	9	11	10	8	<13	9>	3
Women-Owned Business (WBE)																
Yes	9	7	3	4	13	14	6	6	12	9	12	7	15>	11	9	9
Disabled Veterans Business (DBVE)																
Yes	3	3	1	3	6	6	2	3	4	3	5	4	3>	1	4	5
Hubzone																
Yes	1	2	0	0	4	2	1	1	2	3	3	5	1	4	1	2

Table 62

-- Requirements to Bid a Project

- Across the total sample, about one-half (48%) say that they are required to have a prequalified standards and safety program in place in order to bid on a project. As we noted two and four years ago, the need to meet standards to bid a job rises with company size, starting with firms with 5–9 employees: Specifically, only 18% of firms with 1–4 employees encounter these requirements compared with more than double that percent among firms with 5–9 employees (39%) and about triple that percent (57%) among firms with 10–19 employees. Fully three-quarters or more of firms with 20+ employees encounter these requirements.
- Across the total sample, one in four (25%) say that they encounter man-hour requirements for women, minorities or veterans in order to bid on a project. This requirement again falls more heavily on larger firms and increases significantly and steadily from 6% among firms with 1-4 employees, to 21% among firms with 5-9 employees, to 36% for firms with 20-99 employees, and to 56% for firms with 100+ employees.
- Nevertheless, about 6 in 10 firms (65%, statistically unchanged from two years earlier) say that they already have a certified safety program in place or that they plan to institute one in 2024. Having a certified safety plan also increases steadily with company size.
- There continues to be an apparent shortfall between the percentage of firms that are required to show female/minority/veteran man-hour requirements as shown below at 25% and the percentage of electrical contracting firms that report these designations (18%), shown on the preceding page. (Any designation is shown on page 21.)

Prequalified Standards and a Certified Safety Program Needed to Bid a Job (Q10D) - 2024								
	Number of Employees							
	Total	1-4	5-9	1-9	10+	10-19	20-99	100+
	(828)	(306)	(112)	(418)	(407)	(100)	(165)	(142)
	%	%	%	%	%	%	%	%
Yes	48	18	< 39	24	< 72	< 57	< 72	< 82
Female/Minority/Veteran Man-Hour Workforce Requirement Needed to Bid a Job								
Yes	25	6	< 21	10	< 40	24	< 36	< 56
Prequalified Standards and a Certified Safety Program in Place or Will Be Added in 2024 (Q10E)								
Yes	65	35	< 64	43	< 88	< 78	< 88	< 94

Tables 60 and 61 G4

-- Separate Divisions

- Almost one-half of the electrical contractors in this study (47%) currently have a separate division or department that handles service and maintenance. Larger firms are about 20% more likely to have a separate service and maintenance unit compared with smaller firms.
- About one-quarter of the electrical contracting firms in this study (26%) currently have a separate low-voltage division. Larger firms are more than twice as likely to have a low-voltage unit compared with smaller firms.
- About one-tenth have a separate HVAC unit (11%). With the exception of firms with 100+ employees (18%, not shown below), there is no difference by number of employees.

Presence of Separate Division or Department That Handles the Following Work						
	Total		1-9		10+	
	2024	2022	2024	2022	2024	2022
	(827)	(843)	(418)	(471)	(406)	(372)
	%	%	%	%	%	%
Separate Service and Maintenance Unit [Q7c]						
Currently Has	47>	41	37>	28	57	57
Plans to Open in Next 1-2 Years	5	5	4	5	6	4
Total Current or Planned	52>	45	41>	33	63	61
Separate Low-Voltage Unit [Q7a]						
Currently Has	26	22	14	10	38	38
Plans to Open in Next 1-2 Years	6	6	4	5	8	6
Total Current or Planned	32	28	18	15	46	44
Separate HVAC Voltage Unit [7b]						
Currently Has	11	12	10	7	<i>12<</i>	19
Plans to Open in Next 1-2 Years	4	3	3	3	4	3
Total Current or Planned	15	15	14	10	16	21

Tables 40, 41, 42 and 140

Bold percentages are significantly higher than *italicized* percentages | (*) difference is just short of statistical significance

-- Employee Relations

Electrical contractors were asked a series of questions about hiring and retaining workers, their use of contract labor and the extent of their government work.

In the then-current job market (from end of January through the end of March 2024), across the total Version 5 sample, 63% said that they had difficulty *finding* trained workers; separately, 33% said that they had difficulty *retaining* trained workers. Note that the second question (retaining) was not contingent on answers to the first question (difficulty finding trained workers).

- Larger firms have significantly more trouble **both finding and retaining trained** workers.

Extent of Difficulty in Finding or Retaining Trained Workers			
Version 5 (Question 16–17)	2024 Profile Study		
	Total	Number of Employees	
		1-9	10+
	(171)	(87)	(83)
	%	%	%
Difficulty in Finding Trained Workers	63	48	< 80
Difficulty in Retaining Trained Workers	33	21	< 46

Tables 142 and 143

- However, this was also the case two and four years ago; that is, these percentages have not changed significantly from two years earlier. The one exception is the decrease in difficulty of *finding* trained workers among firms with 1–9 employees, although a 10% decrease is just short of statistical significance.

Extent of Difficulty in Finding or Retaining Trained Workers -- Trended						
Version 5_ Question 16–17	Profile Study					
	Total		Number of Employees			
			1-9		10+	
	2024	2022	2024	2022	2024	2022
	(171)	(220)	(87)	(124)	(83)	(96)
	%	%	%	%	%	%
Difficulty in Finding Trained Workers	63	68	48	< 58*	80	81
Difficulty in Retaining Trained Workers	33	27	21	18	46	39

Tables 142 and 143

* Just short of statistical significance

-- Participation in Government Work

Almost 6 in 10 of the electrical contractors who participated in Version 5 of the survey have done government work since about 2022. Almost 6 in 10 also say that they expect to do government work in 2024. Note that in both instances, work for a *local* government is most prevalent and federal is mentioned the least. Larger companies are more likely than smaller companies to do each of these types of work and to work for more than one governmental entity. Note that the difference between smaller and larger companies is even more pronounced in the cases of state and federal work. Specifically, larger firms are about twice as likely to have or plan to do local work but are about four times more likely to have or plan to do state work and about six times more likely to have done federal work than smaller firms.

- The 57% that report having worked for a governmental entity is statistically unchanged between 2022 and planning to do so in 2024.

As was the case two year ago, Local>State> Federal						
Involvement with Government Projects – 2024 Profile Study						
Version 5_Q18a and 182b	Completed Government Work Since About 2022			Expect to Work on Government Projects in 2024		
	Total	Number of Employees		Total	Number of Employees	
		1-9	10+		1-9	10+
	(171)	(87)	(83)	(171)	(87)	(83)
	%	%	%	%	%	%
<u>Mentioned Any</u>	57	42	< 73	55	40	< 73
Local	51	38	< 65	49	34	< 65
State	33	13	< 53	34	17	< 51
Federal	19	5	< 34	18	5	< 33
Mentioned Only 1	24	29 >	18	21	20	22
Mentioned 2+	34	13	< 56	34	17	< 52

Tables 145 and 146

Bold percentages are significantly higher than *italicized* percentages in the direction of the arrow

-- Length of Time Firm Has Been in Business

Across the total sample, 88% of the firms in this survey have been in business for more than 10 years! On average, the electrical contracting firms that participated in this study have been in business an average of 34.8 years.

- As was the case two and four years ago, smaller firms tend to be newer (less than 30 years old, 27.2 years on average), while larger firms are more likely to have been in business for an average of 42.3 years. In fact, 49% of companies with 100+ employees have been in business for 50 years or more (not shown).

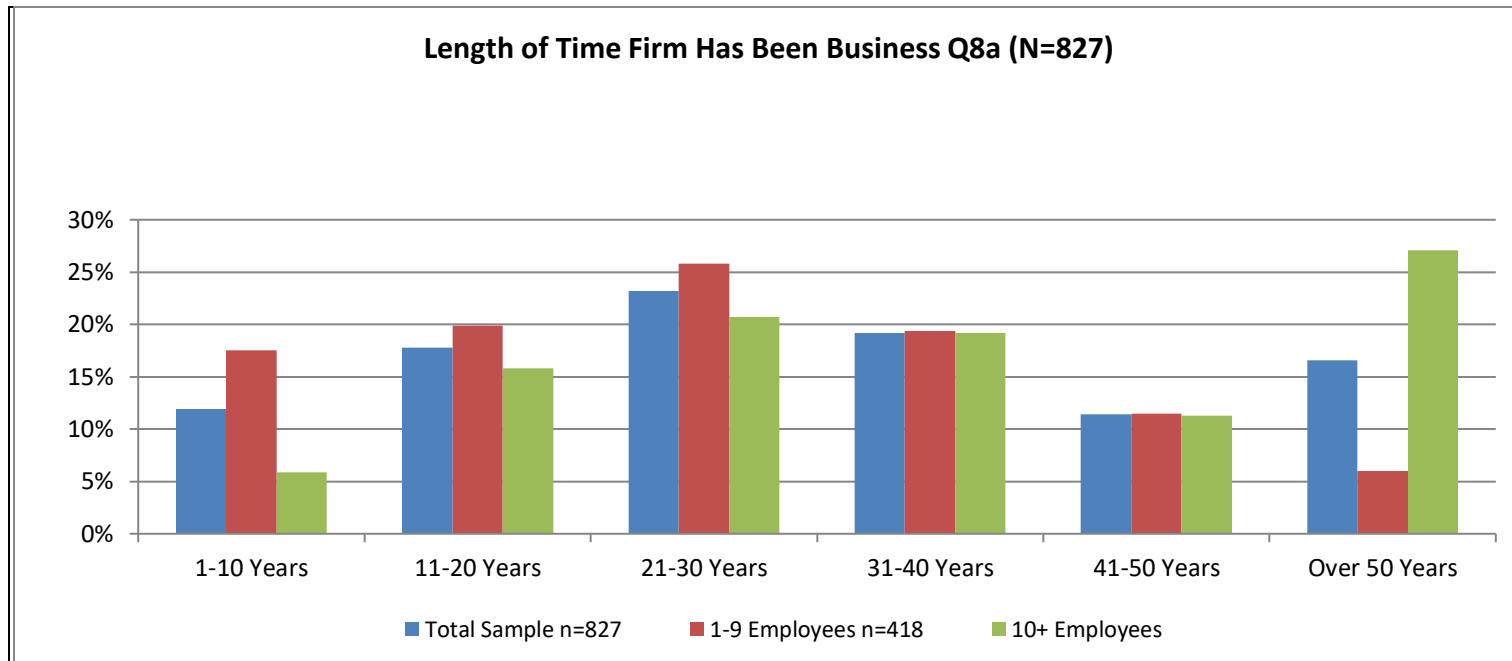


Table 43

Number of Years Firm Has Been in Business (Q8A) – 2024 Profile Study			
	Total	1-9	10+
	(827)	(418)	(407)
	%	%	%
1-10	12	18 >	6
11-20	18	20 >	16
21-30	23	26	21
31-40	19	19	19
41-50	11	12	11
More than 50 years	17	6	< 27
Average Years in Business	34.8	27.2	< 42.3

Table 43

Bold percentages are significantly higher than *italicized* percentages in the direction of the arrow

- As shown below, there are no statistically significant differences in total or by subgroup compared with two years ago.

Number of Years Firm Has Been in Business (Q8A)—Trended						
	Total		1-9		10+	
	2024	2022	2024	2022	2024	2022
	(827)	(843)	(418)	(471)	(407)	(372)
	%	%	%	%	%	%
1-10	12	11	<u>18</u>	14	6	7
11-20	18	20	<u>20</u>	23	16	15
21-30	23	22	<u>26</u>	24	21	20
31-40	19	18	19	20	19	15
41-50	11	12	12	11	11	12
More than 50 years	17	16	6	6	27	30
Average Years in Business	34.8	34.7	27.2	27.9	42.3	43.1

Table 43

“WHO” WORKS FOR CONTRACTING FIRMS?

Age of Respondents

Regardless of company size (number of employees), the survey respondents tend to be middle aged or older, rather than young. Across the total sample, only 3% are aged 18–34, 26% are between the ages of 35–54, 35% are aged 55–64 and 36% are aged 65+.

- Compared with two years ago, the percentage of respondents aged 18–34 increased slightly but significantly from 1% to 3%, reversing the decline that we had reported two years ago. The proportion aged 35–54, 55–64 and 65+ is unchanged compared with two years earlier. The *average* age also did not increase from two years ago.³ This is one of the few instances that the average age of electrical contractors (58.6) did not rise. The last time the electrical contractors in the survey did not get older was reported in 2020.
- The mean age was also statistically unchanged among the total sample and among firms with 1–9 and 10+ employees.
 - As shown below, note that historically, electrical contractors working in larger firms tend to be younger.

Average Age of Electrical Contractor in 2024 and Earlier (Q11)				
	Firm Size			
	Total	1-4	1-9	10+
		(a)	(b)	©
Average Age (2024 Study) N=828	58.6 (no change from 2022)	62.5 (no change from 2022)	60.7 >c (no change from 2022)	56.6 (no change from 2022)
Average Age (2022 Study) N=843	59.3 (increase from 2020)	61.9 (increase from 2020)	61.2 >c (increase from 2020)	56.9 (increase from 2020)
Average Age (2020 Study) N=1635	57.9	59.9	59.3 (decline from 2018) >c	55.2 (increase from 2018)
Average Age (2018 Study) N=1597	58.2	60.6	60.0 >c	53.8
Average Age (2016 Study) N=2419	57.3	58.7	58.5 >c	54.1
Average Age (2014 Study) N=2722	56.2	57.4	57.1 >c	53.3
Average Age (2012 Study) N=1024	56.1	57.5	57.2 >c	52.6
Average Age (2010 Study) N=1077	53	53.8	53.8 >c	50.4
Average Age (2008 Study) N=1157	51.2	52.6	52.1 >c	49.2

Table 63

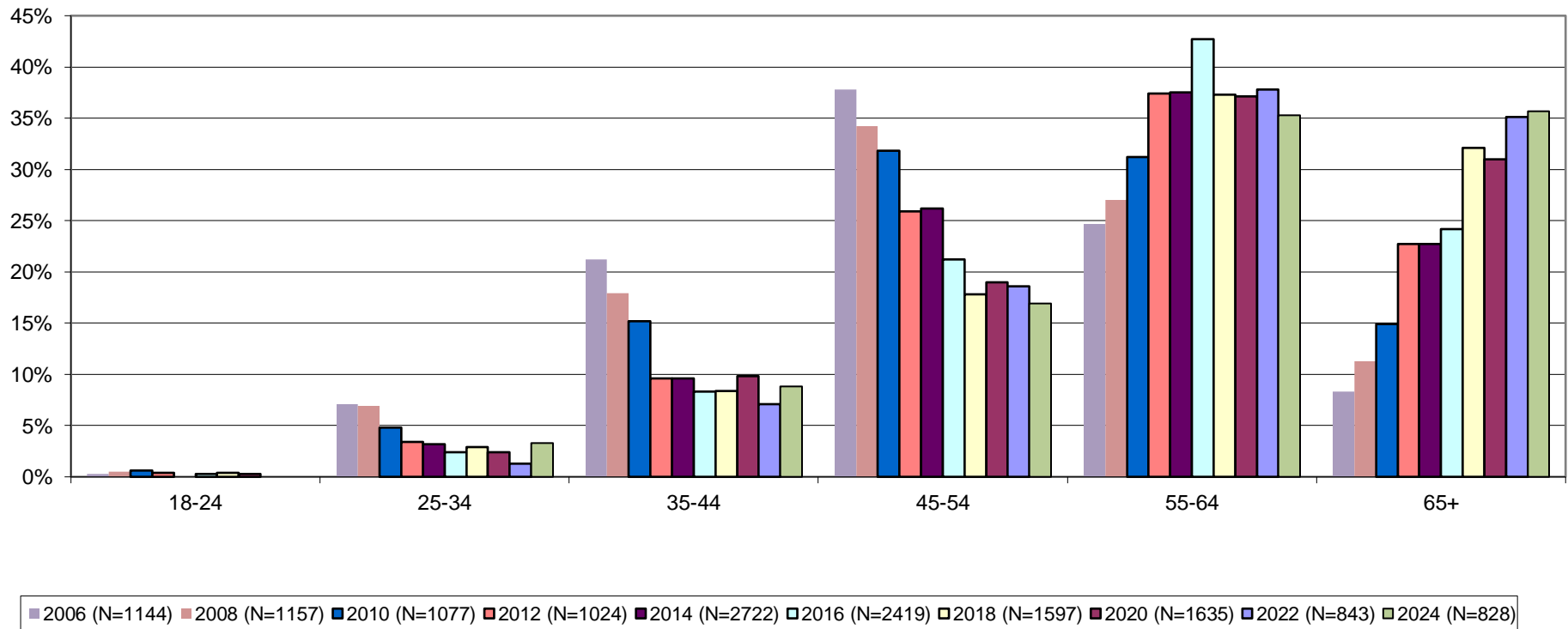
³ NECA vs. non-NECA: The average age is statistically younger among NECA firms and declined compared with two year ago (from 58 to 55.3). Among non-NECA firms, the average age held statistically unchanged at 60 compared with two years earlier, but did not increase.

As shown below, substantially more electrical contractors were in the older age groups, even in 2006. This is most likely because electrical contractors often run multiperson businesses and it takes time to establish the expertise and financial resources to create a business. However, what we have seen over time is an increasing representation in the older groups (55–64 and 65+).

- In particular, while 38% of the electrical contractors were aged 45–54 in 2006, that percentage had dropped by more than half to 17% in 2024. At the same time, the percentages who were aged 55–64 had increased from 25% in 2006 to 35% in 2024, and the percentage aged 65+ quadrupled, rising from 8% in 2006 to 36% in 2024.

[Table 63-1]

Comparison of Age Composition Over Time (Q11)



-- Length of Time Electrical Contractor Has Been in the Industry

On average, survey participants have been in the industry for 33.2 years, statistically unchanged from the 33.9 years reported in 2022. We found 7% of the electrical contractors interviewed have been in the industry more than 50 years, which is statistically unchanged from 2022. As was the case since 2020, not surprisingly, 92% with that much experience are older than 65.

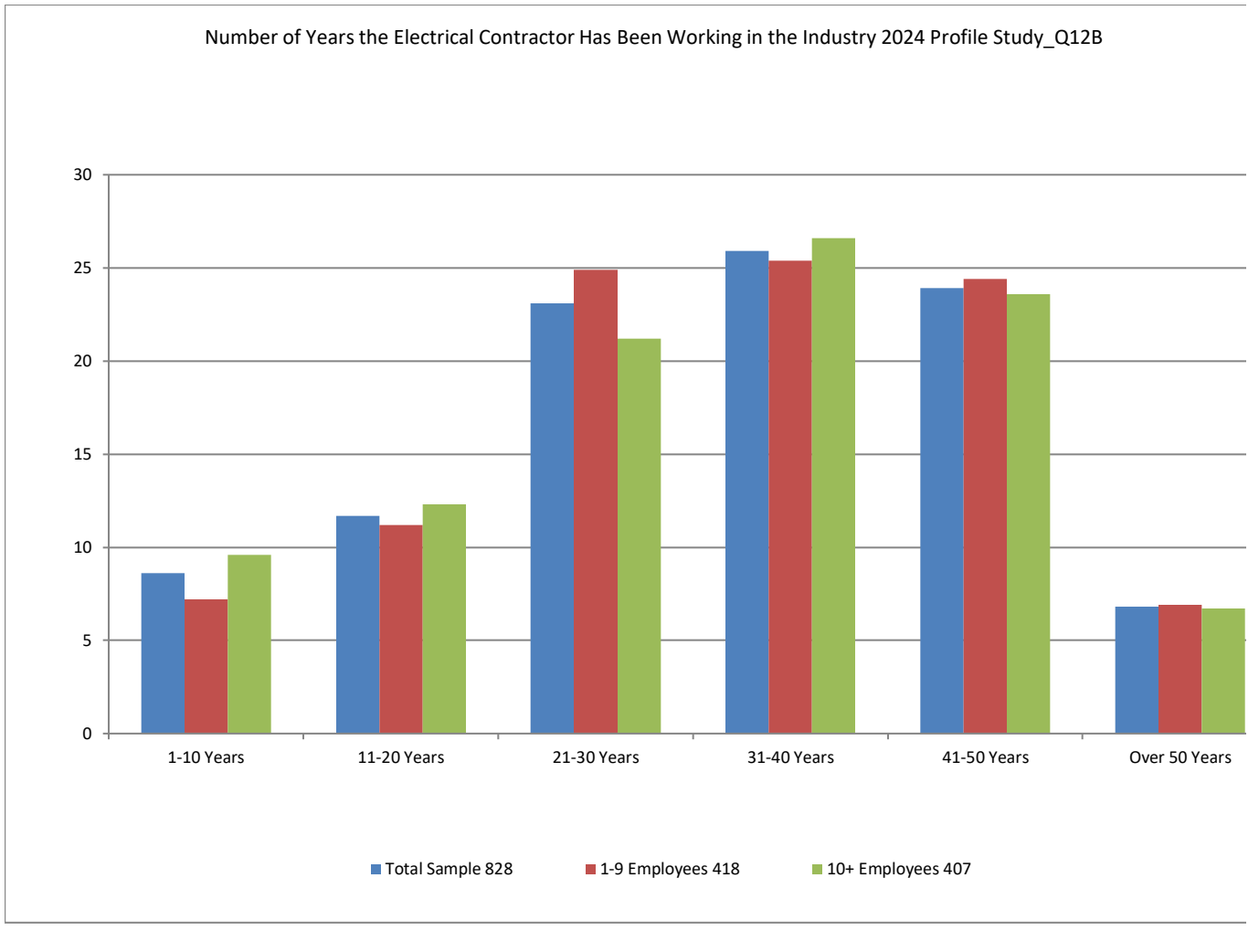


Table 65, Q12B

Respondent Education

6 in 10 electrical contractors have some college education (60%, statistically unchanged from two years ago when it was 61%).

The Any College vs. No College split does not vary markedly by company size, although respondents in firms with 1–4 employees are less likely than firms with 5–9 employees to have attended college (no college is 44% among firms with 1–4 employees compared with 34% in firms with 5–9 employees.) Respondents in firms with 10+ employees are significantly more likely to hold a bachelor’s degree or higher (31% in firms with 10+ employees vs. 23% in firms with 1–9 employees.) A further breakdown by company size is shown on the next page. This is shown on the next page in the chart on the left.

- Earlier years not shown.

**Respondent Education by Number of Employees
2023 Profile Study_Q12A**

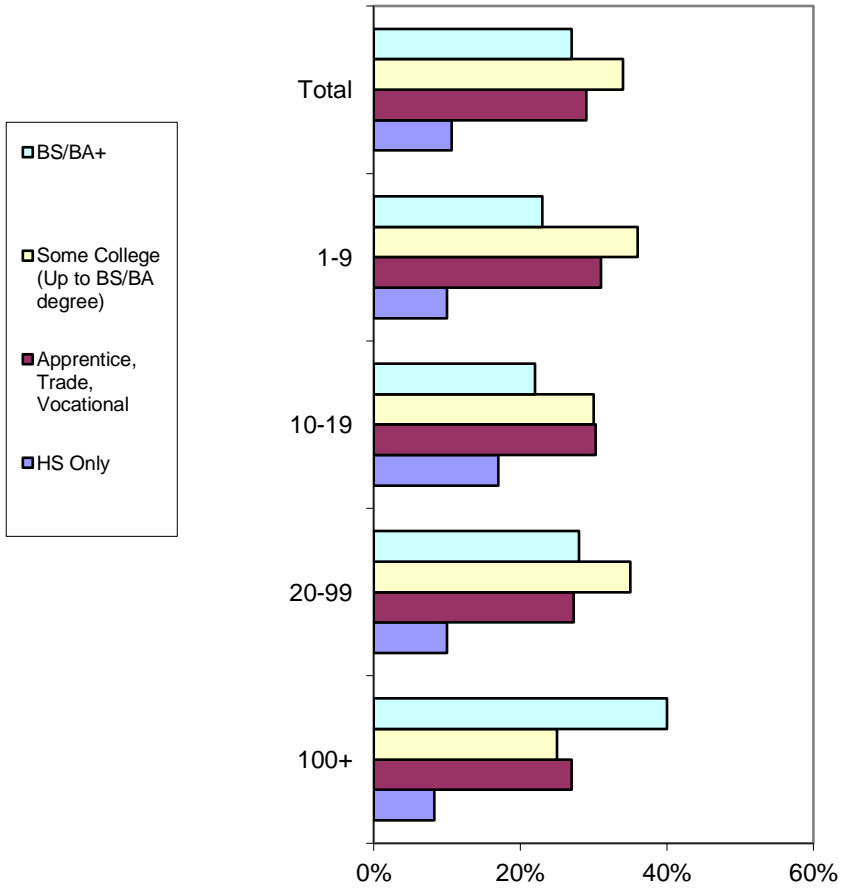


Table 64

**Respondent Education
Among Total Sample
2023 Profile Study_Q12A**

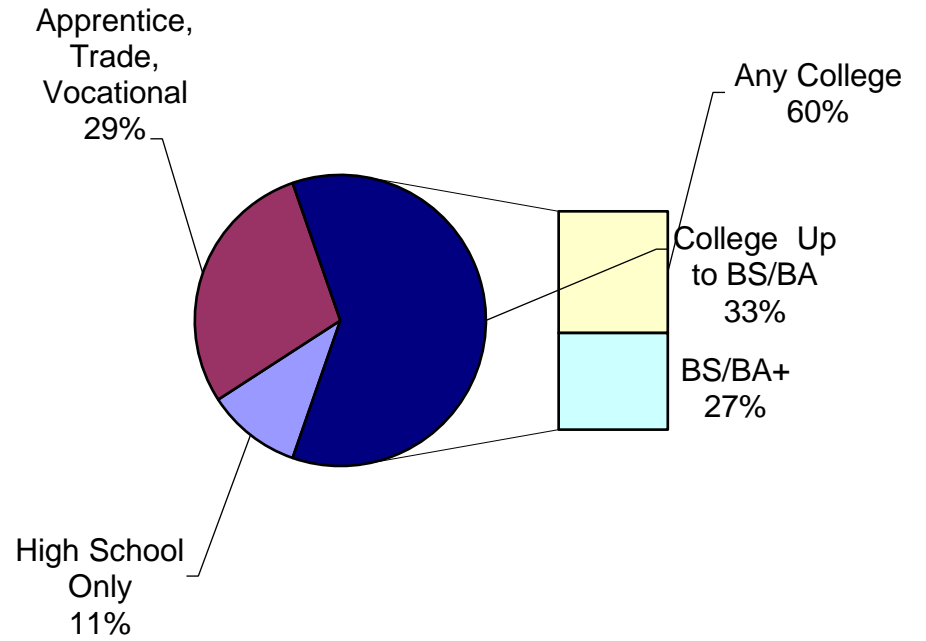


Table 64

Level of Responsibility

- About 7 in 10 of the sample are Owners/Top Management (72%), 12% are Master Electrician or Equivalent Title, 8% are Project Managers, 6% have some “Other” title, 3% are Field Managers and 0.2% are Apprentices.
 - Apprenticeship was first asked in 2024 and cannot be trended.
 - However, more respondents in smaller firms, particularly those in firms with 1–4 employees (not shown) now report having a title of Master Electrician or Equivalent Title in 2024 than in 2022.

Level of Responsibility_Q13A						
	Total		Number of Employees			
			1-9		10+	
	2024	2022	2024	2022	2024	2022
	(827)	(827)	(418)	(459)	(406)	(368)
	%	%	%	%	%	%
Owner/Top Management	72	74	81	84	62	61
Master Electrician or Equivalent Title	12	10	14 >	<i>10</i>	9	10
Project Management	8	7	2	1	14	14
Field Management	3	2	1	1	5 >	3
Apprentice	0.2	-	0	-	0.5	0
Other	6	8	2	< 5	10	12

Table 67

Bold percentages are significantly higher than *italicized* percentages in the direction of the arrow

- In the 2024 Profile Study, there is no difference by location for Owners/Top Managers or for Project Managers, while Master Electricians or Equivalent Title are most prevalent in the Northeast (16%) and least prevalent in the West (8%). Field Managers are less prevalent in North-Central states. (Not shown.)
- Not surprisingly, Owner/Top Managers are most prevalent among those who are 65+ (81%) Those aged 35–54 are less likely to be Owners/Top Management (61%) and more likely to be Project Managers 15%) or Field Managers (5%). (Not shown.)

Gender

- 5% of the electrical contractors who participated in this survey are women, statistically unchanged from 2022. As was the case two years ago, the female electrical contractors interviewed are less likely to work in very small firms (3% among firms with 1–4 employees, and/or with revenues of under \$250K, 1%). They are more likely to be aged 35–54 (9%) and less likely to be located in the Northeast (1%). (Not shown.)

Table 66, Q12C

Where Purchases are Made

In sharp contrast to earlier **ELECTRICAL CONTRACTOR** research (Panel studies and the 2022 Profile Study), the average percentage of electrical contractor purchases that are made at Electrical Distributors posted a large and significant drop from 65% to 48%. The percentage that reported purchases at Retailers (including Big-Box Stores and Local Hardware Stores) at 10% is not directly comparable to what was asked in 2022 because in 2024 we renamed the category from “Big-Box Stores” to “Retailers (including Big-Box and Local Hardware Stores)”. Nevertheless, it is surprising that a broadened category (now also including Local Hardware Stores in addition to Big-Box Stores) should show a decline from 19% to 10%.

- Rather, we think that the survey takers were making a distinction between what they identified as brick-and-mortar outlets (Electrical Distributors and Retailers) and sources that were explicitly identified online sources, all of which posted significant increases.

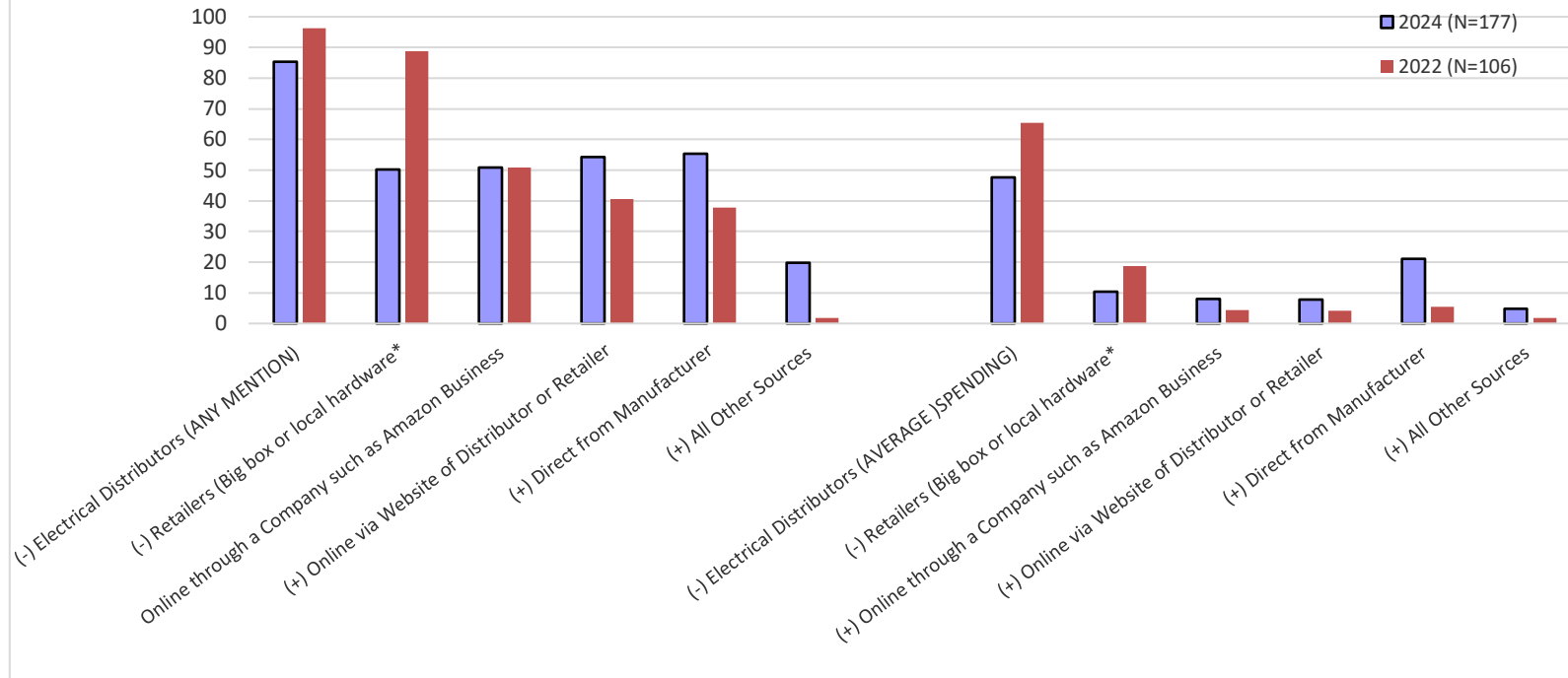
The decline in average spending at Electrical Distributors was attributable to non-NECA firms, whose average purchase declined from 62% in 2022 to 42% in 2024. NECA firms were statistically unchanged on average spending at Electrical Distributors (not shown).

- Only 10% of non-NECA firms expect to increase their spending in the coming year at Electrical Distributors. This is a decrease from the 26% expected spending increase in the coming year in the 2022 Profile study. That is, average spending at Electrical Distributors was down compared with two years earlier and may not go up (not shown).

Interestingly, a statistically higher percentage of NECA firms expect that they will *increase* their spending at Electrical Distributors in the coming year (33% expected increase compared with 13% in 2022, not shown). That is, average spending was statistically unchanged compared to two years earlier but may go up in 2024.

At the same time, percentage spent directly with manufacturers is up dramatically and statistically significantly, from 5.5% in 2022 to 21.1% in 2024.

**Purchases Made at Specific Sources in Previous Year
2024 vs. 2022 -- ANY Spending and Average Spending_V4, Q15A, Q15B**



Tables 98, 99

+/- next to the data labels indicate statistically significant differences from 2020 among the total sample
Retailers was asked as "Big-box Stores" in 2022, so the results are not strictly comparable since Retailers now also includes Local Hardware Stores

Where Purchases are Made, cont.

This finding of lower-than-expected sales at Electrical Distributors is supported by a slightly different question asked to a different group of electrical contractors.⁴ In V3 of the survey, we asked where they bought the tools and equipment that they had purchased in 2023.

- On average, 43% of purchases were made at Electrical Distributors. This question cannot be trended because it was first asked in the 2024 Profile study. However, it is lower than the 65% we would expect based on earlier research. V3 did not ask about *expected* 2024 purchases.
- On average, 13% of purchases were made at Retailers (Big-box or Local Hardware), which may be lower than expected given that the percentage made at Big-box Stores was 19% in 2022. Once again, this question cannot be trended since it was first asked in the 2024 Profile study. However, it is lower than the approximately 20% we would expect based on earlier research. V3 did not ask about *expected* 2024 purchases.
 - In both of these cases, there were too few NECA firms answering this question for meaningful analysis.

⁴ The base size for this question is about 100 who did not also answer V4.

Sources Used to Keep Abreast of Electrical Contractor Industry News, Problem-Solving Ideas and New Product Technology

In this question, we asked the entire sample of electrical contractors taking the survey to tell us—from a list of 13 items—which sources they used to keep abreast of electrical contractor industry news, problem-solving ideas and new technology. As was the case in 2022, the list included media as well as nonmedia sources such as vendors (i.e., distributors and retailers), seminars, webinars and word-of-mouth.

As shown below, Trade Magazines continue to be chosen the most often, by far (78% among the total sample). In contrast, Social Media (26%), Retailers (23%) and Podcasts (10%) score substantially lower on this measure.

As was the case two years ago, Trade Magazine results are equally strong among both small and large firms. More electrical contractors aged 65+ rely on trade magazines compared with those aged 35–54. However, as was the case two years ago, all of the other sources score lower than Trade Magazines with the 35–54 age group. In fact, note the 36-point difference between Trade Magazines and Social Media, even among electrical contractors aged 35–54. The gap is even higher among electrical contractors aged 55+.

Online_Q.1, Sources Used To Keep Abreast Of Electrical Contractor Industry News, Problem Solving And New Product Technology

Base: Total Respondents

	TOTAL	Respondent Age				
		1-9	10+	35-54	55-64	65+
Total Sample	828	418	407	213	292	295
Dk/Na	145	79	65	33	53	55
Total Answered	683	339	342	180	239	240
	100.0	100.0	100.0	100.0	100.0	100.0
<u>Mentioned Any</u>	98				100	
<u>Trade Magazine (Net)</u>	88	91>	86	82		<95
Trade Magazines (Either in Print or Online)	78			71		<87
Trade Magazine or Industry Websites	71			64		<78
Distributors	65	56	<75	58		
Manufacturer's Websites or Online Catalogs	57		60	49		<62
Search Engines	53					
Word of Mouth	49	45	<53			
Trade Shows	44	33	<55			
Webinars/Seminars	42	33	<50			
Manufacturer's Print Catalogs	40			33		<47
Social Media (Such As Facebook, Instagram, Twitter Or YouTube)	25			35>	21	20
Retailers (Big-Box or Local Hardware)	23	30>	17		19	
Podcasts	10	8	<13			7
None	2				0	
Mentioned Only 1 Use	2	4>	1			
Mentioned 2 - 3 Uses	17					
Mentioned 4+ Uses	79	76	<82			

Table 220

Bold indicates significantly larger than the average in the direction of the arrow. *Italics* indicates significantly smaller than the average.

Compared to two years ago, a number of sources posted significant changes among the total sample, including the following:

- Increased: Trade magazine or industry *websites*, search engines, social media, podcasts
- Decreased: Trade magazines, manufacturer websites or online catalogs, manufacturers’ print catalogs, retailers

Based on these results, it appears that there is a strong shift to online sources from print and that manufacturers’ catalogs are relied on less frequently regardless of whether they are offered in print or online.

Sources Used to Keep Abreast of Electrical Contractor Industry News, Problem-Solving Ideas and New Product Technology (Select all that apply)

Only sources that changed are shown

	2024	2022
Total Answered	(683)	(813)
Trade magazines	78	< 93
Trade magazines or Industry Websites	71 >	57
Manufacturer’s Websites or Online Catalogs	57	< 61
Search Engines	53 >	45
Manufacturer’s Print Catalogs	40	< 52
Social Media (such as Facebook, Instagram, Twitter (X), YouTube)	26 >	15
Retailers	23	< 28
Podcasts	10 >	7

Table 220

Bold percentages are significantly higher than *italicized* percentages in the direction of the arrow.

▲ TYPES OF WORK PERFORMED

--Types of Work Performed in Previous Year

Electrical contractors were shown a list of up to 46 different project types and were asked to indicate which types they had performed in the previous year. Starting in 2014, the project types were asked separately for Residential and CII construction.

- Three new project types were added in 2022, under the heading of High-Voltage: Distribution, Substations, Transmission. No new types of projects were added in 2024.

Overview of CII and/or Residential Work Performed (Combined Basis)

When asked about the types of work performed in the previous year (regardless of whether Residential or CII), almost all firms worked on Traditional Power and Lighting (94%). Note that there is a great deal of overlap within this category: 90% worked on Lighting and essentially the same percentage, 91%, worked on Power.

- Three-quarters (75%) worked on various aspects of a category called “Other” (which includes Any Electrical Maintenance/Service/Repair, HVAC Mechanical, Preassembly/Prefabrication of Electrical Components and/or Water Utilities or Wastewater Treatment Plants).
- About three-quarters (77%) worked on at least one aspect of Automations/Controls: about 60% worked on CII Automation/Controls*, and about 40% worked on Residential Automation/Controls*.
- About 7 in 10 worked on Sustainability (71%) and/or Power Quality (71%).
 - Power Quality was the only category to post an increase compared with two years ago. None of the categories posted a decline. This is in contrast to 2022 when a number of the categories had a reported two-year decline (not shown).
- 55% worked on Communications Systems/Connectivity.
- About 2 in 10 worked on a relatively newly added category called High-Voltage.

*CII and Residential Automation/Controls are shown separately on the tables starting on pages 46 and 47.

**Types of Work Performed in Previous Year (CII and/or Residential Combined)
2024 vs. 2022 Profile Study**

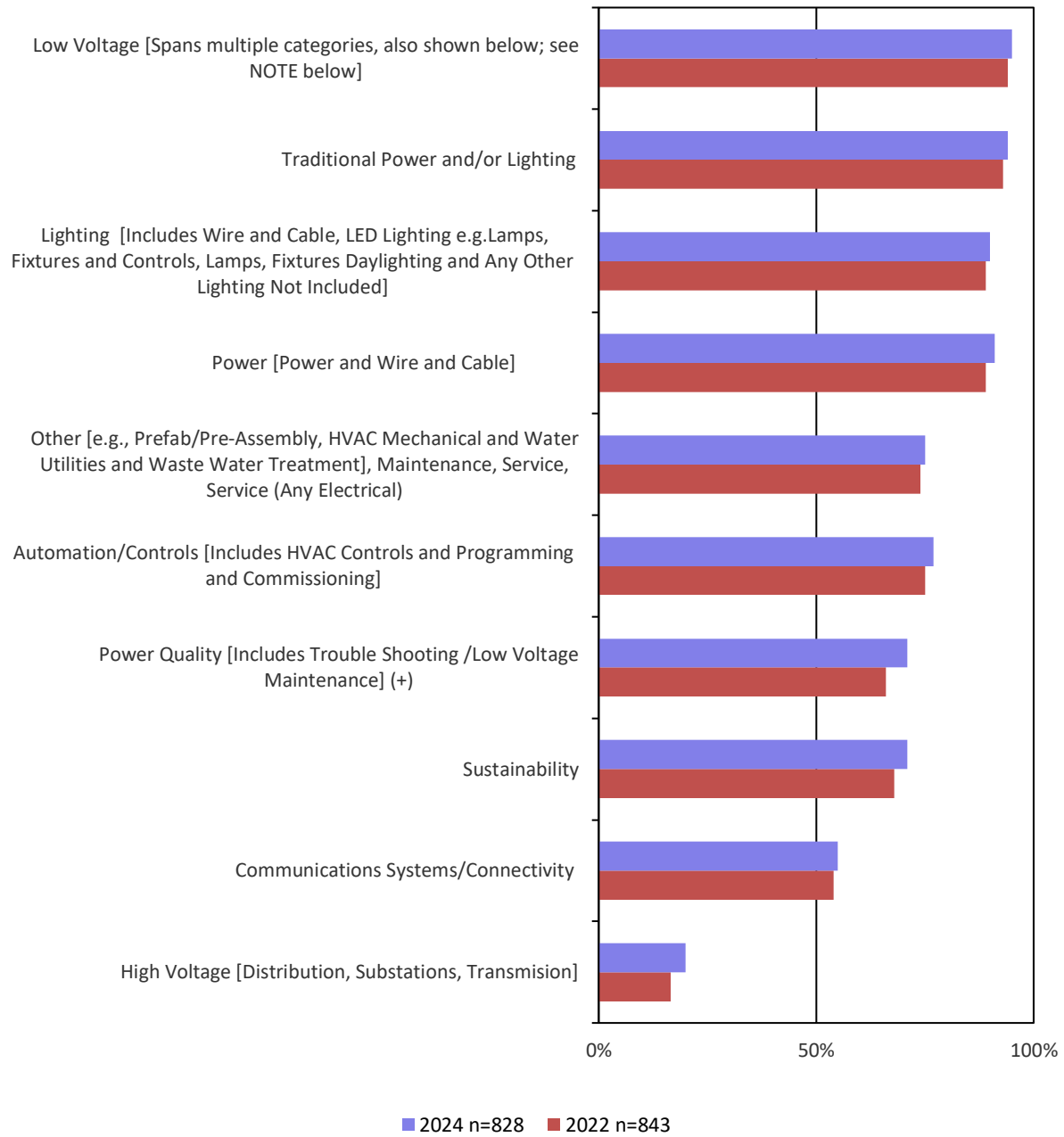


Table 38

NOTE: LOW-VOLTAGE (NET) IN THIS TABLE INCLUDES: NETWORKING, FIBER OPTICS, STRUCTURED WIRING/CABLING, DATA CENTERS, TROUBLESHOOTING/MAINTENANCE OF LOW-VOLTAGE SYSTEMS, LED LIGHTING, LIGHTING CONTROLS, HOME AUTOMATION, FIRE/LIFE SAFETY, SECURITY, HOME THEATER/SOUND, AUTOMATED BUILDING SYSTEMS, INDUSTRIAL CONTROLS, SOUND AND VIDEO, PROGRAMMING AND COMMISSIONING, HVAC CONTROLS.

+ indicates a statistically significant increase compared with 2022 results

The individual project types that make up each category are shown on the next page in total⁵ and by whether the work was done in Residential or CII construction.

Three new project types were added in 2022: High-Voltage—which is a CII category but not a Residential category—and is composed of Distribution, Substations and Transmission. No new categories were added in 2024.

As we've said in previous Profile reports, certain types of work lend themselves more to CII projects than to Residential projects.

Note that there is repeated evidence throughout this report that electrical contractors are continuing to work in somewhat nontraditional areas. For example, 38% worked on either HVAC Controls and/or HVAC Mechanical; 15% work on *both* HVAC Controls and HVAC Mechanical, a statistically significant decline from 18% two years ago (not shown). 19% worked on HVAC Mechanical, statistically unchanged from two years earlier. 17% worked on Water Utilities/Wastewater Treatment Plant projects in the previous year, unchanged from two years earlier.

95% performed Low-Voltage work⁶, mentioned here because it is not traditional power (although it often ties into it!).

Tables 38, 39 (CII and Residential); 36, 37 (CII) and 34, 35 (Residential)

⁵ Without regard to whether the work was done in Residential or CII construction

⁶ NOTE: LOW-VOLTAGE (NET) IN THIS TABLE INCLUDES: NETWORKING, FIBER OPTICS, STRUCTURED WIRING/CABLING, DATA CENTERS, TROUBLESHOOTING/ MAINTENANCE OF LOW-VOLTAGE SYSTEMS, LED LIGHTING, LIGHTING CONTROLS, HOME AUTOMATION, FIRE/LIFE SAFETY, SECURITY, HOME THEATER/SOUND, AUTOMATED BUILDING SYSTEMS, INDUSTRIAL CONTROLS, SOUND AND VIDEO, PROGRAMMING AND COMMISSIONING, HVAC CONTROLS.

TRENDED RESULTS

The table on the next page shows the same results, now trended, with differences from the 2022 results shown only by a + or - symbol.

Note that the results are slightly different for the total sample when commercial and residential construction are viewed on a *combined* basis than for CII and residential separately.

CII and Residential on a combined basis:

- Overall, the results are relatively unchanged compared with two years ago. Where there are changes, they are almost all increases compared with two years earlier. Two years ago, some of the changes were declines (not shown). Also, more of the increases in 2024 were in residential construction rather than in CII on its own or in the combined category of residential and/or CII.
 - More electrical contractors said that they are performing “other types of lighting not included in the listing on the next page” in both residential and CII projects.
 - Daylighting/Shading Systems rose in residential construction and on a combined basis.
 - Home Automation/Smart Home/Connectivity rose in residential construction, as did Programming and Commissioning.
 - Preassembly/Prefabrication rose in the combined category of residential and/or CII construction, but not in either residential or CII alone.
 - Electric Vehicle Charging Equipment rose in both residential and CII projects as well as on a combined basis.
 - LEED Projects rose in residential construction and on a combined basis.
 - Smart Grid Technology rose on a combined basis.
 - Power Quality rose as a category on a combined basis and on residential projects.

The trended results showing 2023 and 2021 are shown on the following pages.

Seven work types—Industrial Controls, Building Automation Systems, Sound and Video or VDV, and Water Utilities/Waste, plus the High-Voltage categories of Substations, Distribution and Transmission—do not pertain to residential construction and were therefore not asked.

Two work types—Home Automation/Smart Home/Connectivity and Home Theater/Sound or VDV—do not pertain to CII construction and were therefore not asked.

**Types of Work Performed by Company in 2023 vs. 2021 Residential and/or CII Construction
on a Combined Basis [Q6]**

Base Answering	ANY (828)	RES (828)	CII (828)
COMMUNICATIONS SYSTEMS/CONNECTIVITY	55	23	46
Structured Wiring/Cabling	45	18	37
Networking VOIP/Wireless/ Broadband, etc.)	36	13	29
Data Centers	23	4	21
Fiber Optics (Communications and Security)	26	4	24

	ANY	RES	CII
SUSTAINABILITY	71	41	52
Energy-Efficiency Projects/ Upgrades (non-LEED)	40	16	32
Electric Vehicle Charging Equipment	47+	31+	28+
LEED Projects	28+	10+	22
Solar/Photovoltaics	22	10	15
Energy Audits (including Thermal Imaging)	19	4	17
Smart or Net Metering	17	6	14
Cogeneration	8	3	7
Energy Storage	13	6	9
Geothermal	5	3	3
Wind Generation	4	1	3
Smart Grid Technology	6+	2	5
Fuel Cells	3	1	2
Microgrids	4	1	3

	ANY	RES	CII
POWER QUALITY	71+	36+	55
Backup Power/UPS	55	23	43
Troubleshooting/Maintenance of Low-voltage Systems	44	20	35
TVSS/Lightning Surge Suppression	41	18	34
Energy Management/Power Quality	26	5	23

LOW-VOLTAGE	95	60	76
--------------------	----	----	----

The symbols (+) and (-) indicate significant differences at the 90% level of confidence versus the 2022 Profile Study (each reporting on the previous year)

Base Answering	ANY (828)	RES (828)	CII (828)
TRADITIONAL POWER/LIGHTING	94	61	76
Lighting	90	59	71
LED Lighting (Including Lamps, Fixtures and Controls)	87	56	66
Lighting Fixtures	80	49	62
Ballasts or LED Drivers	71	37	58
Lamps	65	38	50
Lighting Controls	72	39	55
Daylighting/Shading Systems	32+	13+	25
Any Other Lighting Not Included Above	32+	16+	24+
Power	91	59	70
Power	84	52	64
Wire and Cable	83	54	65

	ANY	RES	CII
AUTOMATION/CONTROL SYSTEMS	77	41	59
Fire/Life Safety (including Alarms/Detectors)	52	24	40
HVAC Controls	34	15	27
Security: CCTV/Access/Motion, etc.	41	19	32 ⁻
Industrial Controls (including PLCs and VFDS and Switchgear)	39	NA	39
Home Automation/Smart Home/Connectivity	25+	25+	NA
Home Theater/Sound or VDV	14	14	NA
Building Automation Systems/Facilities Connectivity	28	NA	28
Programming and Commissioning	25	7+	22
Sound and Video or VDV	19	NA	19

	ANY	RES	CII
OTHER	75	43	61
MSR (Any Electrical)	70	41	56
HVAC (Mechanical)	19	9	14
Preassembly/Prefabrication of Electrical Components	23+	6	21
Water Utilities or Wastewater Treatment Plants	17	NA	17
HIGH-VOLTAGE	20	NA	20
Distribution	17	NA	17
Substations	11	NA	11
Transmission	6	NA	6

Types of Work Performed by Company in 2023 vs. 2021
Residential and/or CII Construction on a Combined Basis [Q6]

Base Answering	(828)		(843)
COMMUNICATIONS SYSTEMS/CONNECTIVITY	2023		2021
	55		54
Structured Wiring/Cabling	45		45
Networking VOIP/Wireless/Broadband, etc.)	36		34
Data Centers	23		25
Fiber Optics (Communications and Security)	26		27

SUSTAINABILITY	2023		2021
	71		68
Energy-Efficiency Projects/Upgrades (non-LEED)	40		40
Electric Vehicle Charging Equipment	47+	>	40
LEED Projects	28+	>	23
Solar/Photovoltaics	22		24
Energy Audits (including Thermal Imaging)	19		18
Smart or Net Metering	17		16
Cogeneration	8		9
Energy Storage	13		11
Geothermal	5		6
Wind Generation	4		4
Smart Grid Technology	6+	>	4
Fuel Cells	3		2
Microgrids	4		3

POWER QUALITY	2023		2021
	71+	>	66
Backup Power/UPS	55		54
Troubleshooting/Maintenance of Low-voltage Systems	44		41
TVSS/Lightning Surge Suppression	41		39
Energy Management/Power Quality	26		25

HIGH-VOLTAGE	2023		2021
	20		17
Distribution	17		15
Substations	11		9
Transmission	6		5

Base Answering	(828)		(843)
TRADITIONAL POWER/LIGHTING	2023		2021
	94		93
Lighting	90		89
LED Lighting (Including Lamps, Fixtures and Controls)	87		86
Lighting Fixtures	80		80
Ballasts or LED Drivers	71		68
Lamps	65		64
Lighting Controls	72		70
Daylighting/Shading Systems	32+	>	25
Any Other Lighting Not Included Above	32+	>	23
Power	91		89
Power	84		82
Wire and Cable	83		84

AUTOMATION/CONTROL SYSTEMS	2023		2021
	77		75
Fire/Life Safety (including Alarms/Detectors)	52		50
HVAC Controls	34		37
Security: CCTV/Access/Motion, etc.	41		44
Industrial Controls (including PLCs and VFDS and Switchgear)	39		38
Home Automation/Smart Home/Connectivity	25+	>	20
Home Theater/Sound or VDV	14		12
Building Automation Systems/Facilities Connectivity	28		26
Sound and Video or VDV	19		21
Programming and Commissioning	25		22
OTHER	2021		2019
	75		74
MSR (Any Electrical)	70		68
HVAC (Mechanical)	19		21
Preassembly/Prefabrication of Electrical Components	23+	>	20
Water Utilities or Wastewater Treatment Plants	17		17

LOW-VOLTAGE	95		94
--------------------	----	--	----

Types of Residential Work Performed by Company in 2023 vs. 2021 [Q6, Table 34]

Base Answering	(828)		(843)
COMMUNICATIONS SYSTEMS/CONNECTIVITY	2023		2021
Structured Wiring/Cabling	23		20
Networking VOIP/Wireless/Broadband, etc.	18		16
Data Centers	13		10
Fiber Optics Communications and Security	4		3
	4		2

SUSTAINABILITY	2023		2021
	41		37
Energy-Efficiency Projects/Upgrades (non-LEED)	16		14
LEED Projects	10 ⁺	>	6
Energy Audits (including Thermal Imaging)	4		4
Solar/Photovoltaics	10		11
Electric Vehicle Charging Equipment	31 ⁺	>	26
Smart or Net Metering	6		6
Cogeneration	3		3
Energy Storage Systems	6		4
Wind Generation	1		1
Geothermal	3		3
Fuel Cells	1		1
Smart Grid Technology	2		1
Microgrids	1		1

POWER QUALITY	2023		2021
	36 ⁺	>	32
Backup Power/UPS	23		21
Troubleshooting/Maintenance of Low-voltage Systems	20		19
TVSS/Lightning Surge Suppression	18		15
Energy Management/Power Quality	5		5

LOW-VOLTAGE WORK	2023		2021
	60		59

Base Answering	(828)		(843)
TRADITIONAL POWER/LIGHTING	2023		2021
	61		61
Lighting	59		59
LED Lighting (Including Lamps, Fixtures and Controls)	56		55
Lighting Fixtures	49		50
Ballasts or LED Drivers	37		36
Lamps	38		38
Lighting Controls	39		38
Daylighting/Shading Systems	13 ⁺	>	8
Any Other Lighting Not Included Above	16 ⁺	>	10
Power	59		58
Wire and Cable	52		54
Power	54		53

AUTOMATION/CONTROL SYSTEMS	2023		2021
	41		40
Fire/Life Safety (including Alarms/Detectors)	24		22
Industrial Controls (including PLCS and VFDS, Switchgear)	0		0
HVAC Controls	15		16
Security: CCTV/Access/Motion, etc.	19		17
Building Automation Systems/Facilities Connectivity	0		0
Sound and Video or VDV	0		0
Programming and Commissioning	7 ⁺	>	4
Home Automation/Smart Home/Connectivity	25 ⁺	>	20
Home Theater/Sound or VDV	14		12

OTHER	2023		2021
	43		42
Maintenance/Service/Repair (Any Electrical)	41		39
Preassembly/Prefabrication of Electrical Components	6		5
HVAC (Mechanical)	9		10
Water Utilities or Wastewater Treatment Plants	0		0

Types of CII Work Performed by Company in 2023 vs. 2021 [Q6, Table 36]

Base Answering	(828)		(843)
COMMUNICATIONS SYSTEMS/CONNECTIVITY	2023		2021
	46		48
Structured Wiring/Cabling	37		40
Networking VOIP/Wireless/ Broadband, etc.	29		30
Data Centers	21		24
Fiber Optics Communications and Security	24		26

SUSTAINABILITY	2023		2021
	52		51
Energy-Efficiency Projects/ Upgrades (non-LEED)	32		34
LEED Projects	22		20
Energy Audits (including Thermal Imaging)	17		16
Solar/Photovoltaics	16		18
Electric Vehicle Charging Equipment	28+	>	24
Smart or Net Metering	14		13
Cogeneration	7		7
Energy Storage Systems	9		8
Wind Generation	3		3
Geothermal	30		3
Fuel Cells	2		2
Smart Grid Technology	5		4
Microgrids	3		3

POWER QUALITY	2023		2021
	55		53
Backup Power/UPS	43		43
Troubleshooting/Maintenance of Low-voltage Systems	35		34
TVSS/Lightning Surge Suppression	34		33
Energy Management/Power Quality	23		23

HIGH-VOLTAGE	2023		2021
	20		17
Distribution	17		15
Substations	11		9
Transmission	6		5

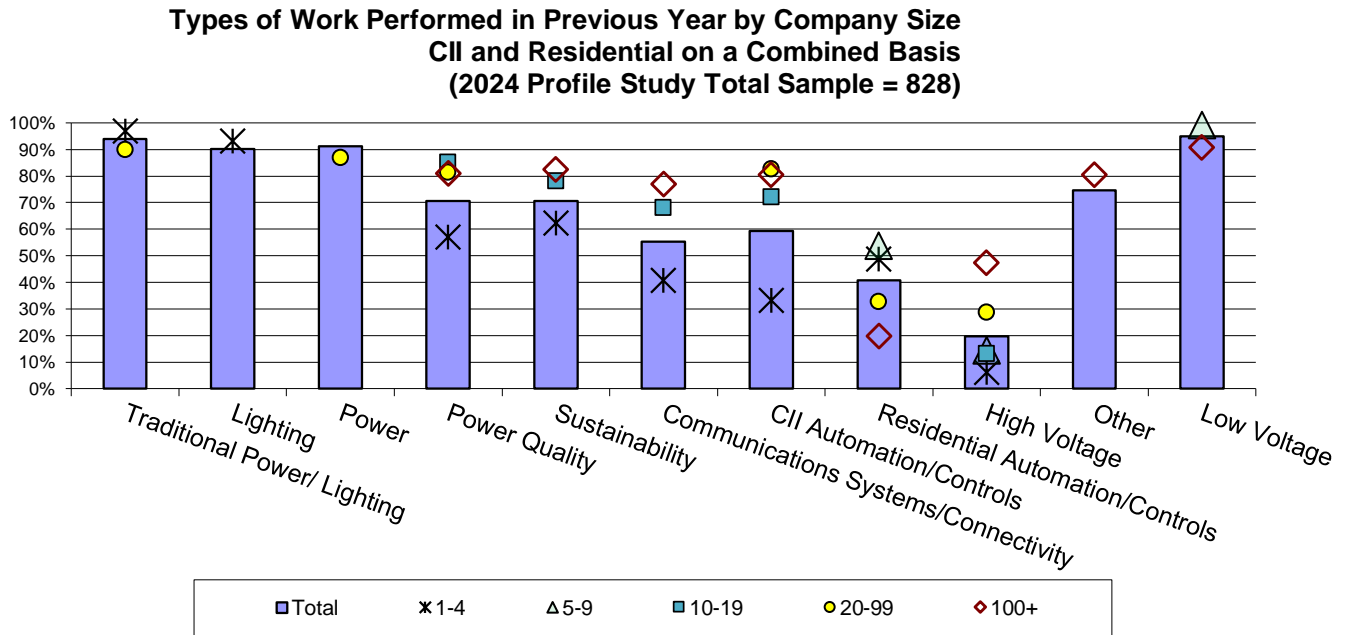
Base Answering	(828)		(843)
TRADITIONAL POWER/LIGHTING	2023		2021
	76		76
Lighting	71		72
LED Lighting (Including Lamps, Fixtures and Controls)	66		67
Lighting Fixtures	62		62
Ballasts or LED Drivers	58		58
Lamps	50		49
Lighting Controls	55		53
Daylighting/Shading Systems	25		22
Any Other Lighting Not Included Above	24+	>	19
Power	70		70
Wire and Cable	65		67
Power	64		64

AUTOMATION/CONTROL SYSTEMS	2023		2021
	59		60
Fire/Life Safety (including Alarms/Detectors)	40		39
Industrial Controls (including PLCS and VFDS, Switchgear)	39		38
HVAC Controls	27		30
Security: CCTV/Access/ Motion, etc.	32*	<	36
Building Automation Systems/Facilities Connectivity	28		26
Sound and Video or VDV	19		21
Programming and Commissioning	22		20
Home Automation/Smart Home/Connectivity			N/A
Home Theater/Sound or VDV			N/A

OTHER	2023		2021
	60		61
Maintenance/Service/Repair (Any Electrical)	56		57
Pre-Assembly/Prefabrication of Electrical Components	21		18
HVAC (Mechanical)	14		16
Water Utilities or Wastewater Treatment Plants	17		17
LOW-VOLTAGE WORK	2023		2021
	76		77

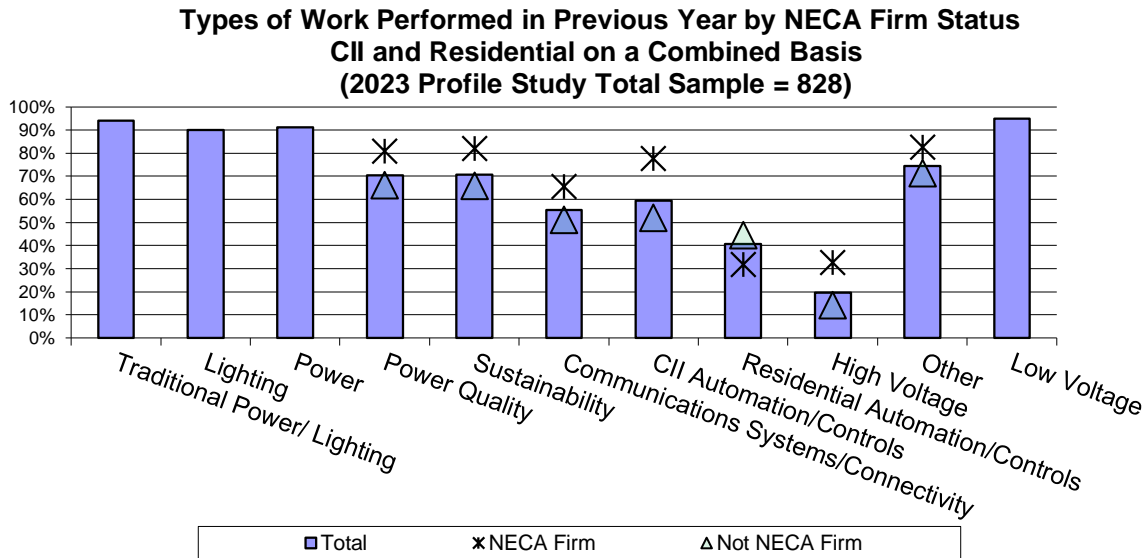
The differences by category by number of employees are shown below:

- As has often been the case in the past, the largest firms—those with 100+ employees—are involved in more work categories (they are above average in 6 categories—bars—as shown below.)
- All of the other employee size groups are more likely than average to be involved in between 2 and 4 of the categories.
 - Note that the type of categories involved in also varies by company size. For example, the smallest firms (1–4 employees) are more likely than average to be involved in Traditional Power, Lighting and Residential Automation/Controls; firms with 5–9 employees are also more likely than average to be involved with Residential Automation/Controls and Low-Voltage. In contrast, the largest firms (100+ employees) are more likely than average to be involved in more complex projects such as “Other” project types which include Prefabrication of Electrical Components, HVAC Mechanical and Water Utilities and Wastewater Treatment , as well as Power Quality, Sustainability, Communications Systems/Connectivity and High-Voltage projects.

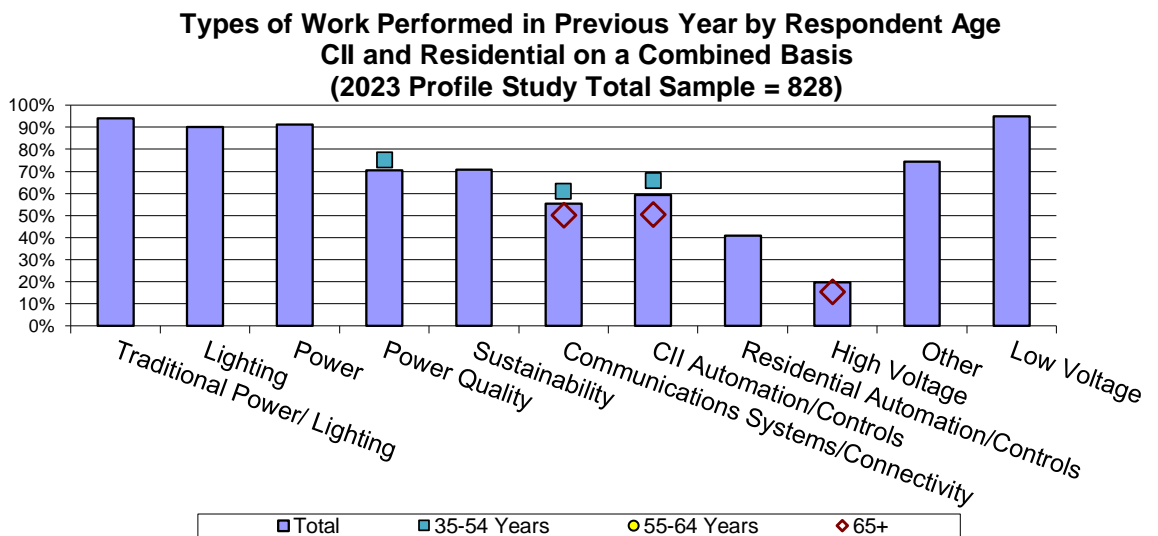


The differences by category by NECA firm membership are shown below:

NECA firms generally follow the trend of larger firms, particularly firms with 100+ employees. The statistically significant differences are in the same direction.



The differences by respondent age are shown below. Younger respondents (35–54) work for firms that perform more types of work than average. Older respondents (65+) work for firms that perform fewer types of work than average. In general, though, there are relatively few differences by respondent age.



On the next few pages, we look at the individual project types that make up the broad categories shown in the chart above by number of employees.

Among firms working in **Residential and/or CII** on a combined basis:

Larger firms: 10+ employees, (particularly 100+ employees), \$2.5 million or more in revenue (particularly \$10 million+), NECA firms (which tend to be larger) and younger respondents (who tend to work for larger firms) tend to be involved in the most types of projects as shown by the bolded percentages.

The main exception to this finding is that larger firms are *less* likely to work on specifically Residential projects.

In addition to Residential projects, smaller firms are more likely than larger firms to work on Traditional Power and Lighting and less likely to be involved in specialized or advanced projects such as Sustainability or Building Automation/Controls.

There seems to be a continuum in that younger contractors (35–54) tend to work for firms that do the **most** different types of work while the oldest contractors (65+) do the *least* different types of work. Contractors aged 55–64 are between these two age groups and tend to be no different than the average on most types of work. Note that the younger contractors in our sample tend to work for the larger firms, so there is a great deal of overlap.

Firms with 5–9 employees stand out because they are more likely than other firms to perform low-voltage work (99% against an already high average of 95%), particularly jobs involving Wire and Cable (specifically as part of low-voltage work), Home Automation/Connectivity, Home Theater or VDV as well as Geothermal.

On the next page, blank cells are no different than the average or total column. **Bolded** cells indicate that the percentage is statistically significantly higher than the average and the *italicized* cells are statistically significantly lower at the 90% level of confidence.

Pink is smaller than average and **green** is larger than average.

Q.6 Specific Categories In Which Company Worked In 2023 - Residential/C/II (Net) (In Rank Order)																			
Base: Total Respondents																			
	NECA Firm			Company Size (Employees Q.2A)							Company Size (Revenue Q.3)					Resp Age			
	TOTAL	YES	NO	1-4	5-9	1-9	10+	10-19	20-99	100+	<\$250K	\$250K-\$1M	\$1M-\$2.5M	\$2.5M-\$10M	\$10M+	35-54	55-64	65+	
Total Answered	828	242	585	306	112	418	407	100	165	142	209	135	109	132	165	213	292	295	
Mentioned Any	97			99	100	100	95			93	100							98	
Traditional Power/Lighting (Net)	94			97		96	92		90		98								
Power (Sub Net)	91					93			87										
Power	84	88		79		82	87				80		92		90	90		80	
Wire And Cable	83	88	81	78	89				87		77				88	88		78	
Lighting (Sub Net)	90			93		92	88				95								
Lighting - Excluding "Other" (Sub Net)	90			93		92	88				95								
LED Lighting (Including Lamps, Fixtures And Lighting Fixtures	87										90								
Lighting Controls	72	81	68	58		63	81		83	80	60	64	83	81	85	79		68	
Ballasts Or LED Drivers	71	76	68	65		67	74			65			77	77	78			63	
Lamps	65	69	63	59		61	68		71			58		71	74			61	
Daylighting/Shading Systems	32	49	25	15	25	18	46		48	52	13	23		43	59	43		22	
Any Other Lighting Not Included Above	32	43	27	19		22	41		42	44	17		23	40	49	44	27	26	
Automation/Controls Systems (Net)	77	87	73	62		67	87	87	89	85	60		88	88	89	81		72	
Fire/Life Safety Or Security (Sub-Sub-Net)	59	74	53	42		45	74		78	75	39	51		76	79	65		52	
Fire/Life Safety (Including Alarms/Detectors Security: Cctv/Access/Motion,Etc.	52	70	45	33	40	35	69	60	73	71	31	39		70	77	57		45	
Industrial Controls (Including Plcs And Vfds	41	52	36	26		29	53		50	64	24	33		48	65			37	
HVAC Controls	39	58	31	16		22	57	50	53	67	11	33		52	68		43	32	
Building Automation Systems/Facilities Conn	34	44	30	27		29	39		47	27				45					
Home Automation/Smart Home/Connectivity	28	48	21	8		12	44		42	56	8	18		35	56			23	
Programming And Commissioning	25	35	21	11		15	35		30	47	8			45	34			16	
Sound And Video Or VDV	19	32	14	6		8	31	13	31	43	4	12		44				13	
Home Theater/Sound Or VDV	14			21		17	10		10	6				7				11	
Other	75	83	71			72	77			80	69	66	83	85					
Maintenance/Service/Repair (Any Electrical)	70	76	67							80	69	66	83	85					
Pre-Assembly/Pre-Fabrication Of Electrical	23	39	17	10		13	33	15		55	10	12		53	29			19	
HVAC (Mechanical)	19	23	17	14		17				26		13							
Water Utilities Or Waste Water Treatment P	17	29	12	5		9	26			35	6	7	25	35				14	
Sustainability	71	82	66	62		64	78	78		82	60		79	83					
Electric Vehicle Charging Equipment	47	54	44	41		43	52	60			39		55	58					
Energy Efficiency Projects/Upgrades (Non-t	40	53	34	25		28	51		51	56	25	31		46	59	46		36	
Leed Projects	28	42	22	15	21	17	39		34	55	19	16		52					
Solar/Photovoltaics	22	38	15	11		14	29			40	11			42	27			16	
Energy Audits (Including Thermal Imaging)	19	33	12	5	13	7	30		31	37	4	8	26	41	27			14	
Smart Or Net Metering	17	27	13	7		9	25		24	27	7	12		32	24			11	
Energy Storage Systems	13	25	8	6		8	18			27	6	9		24					
Cogeneration	8	14	6	6		6	11			13	5			15					
Smart Grid Technology	6	12	3	3		4	8			13	3			2	13	9			
Geothermal	4	7	3	2	9					2									
Microgrids	4	8	3	2		3	6	2		11			2	2	10				
Wind Generation	4	8	2	0		1	6			11	1	1		10					
Fuel Cells	3																		
Power Quality (Net)	71	81	66	57		59	82	85	81	81	56		77	84	84	75			
Backup Power/UPS Or Energy Managemen	58	74	51	38		41	75	74	75	75	34		68	74	80			52	
Backup Power/UPS	55	71	49	37		40	71	69	70	73	33		63	69	78		59	49	
Troubleshooting/Maintenance Of Low Voltage	44	57	38	33		35	53		50	59	32			52	58				
TVSS/Lightning Surge Suppression	41	55	36	23	33	26	57	54	58	58	21	31		54	67				
Energy Management/Power Quality	26	42	19	8		11	41	35	38	48	7	16		38	48	33		20	
Communications Systems/Connectivity (Net)	55	66	51	41		43	68	68	77	77	37			64	76	61		50	
Structured Wiring/Cabling/Connectivity	45	60	39	29		32	59	53	53	69	25			56	68	52		40	
Networking (Voip/Wireless/Broadband, Etc.)	36	46	31	25		27	44			58	21	28		58	42			30	
Fiber Optics (Communications And Security	26	46	17	8	17	10	42		38	62	7	11	19	63				21	
Data Centers	23	36	18	10	14	11	35			54	8	18	16	50	28			17	
High Voltage (Net)	20	33	14	6	14	8	31	13	28	47	7	7		45				16	
Distribution	17	26	13	5	11	6	27		26	39	5	5		36					
Substations	11	24	6	2	6	3	19			35	3	4		30	15			8	
Transmission	6	12	4	2		3	9			18	3	3		14					
Any HVAC (Controls Or Mechanical)	38	48	34	30		33	43			50	31	30		48					
HVAC Controls and Mechanical	15	19	14	11		12	17			23		9							
Low Voltage Work (Net)*	95			99						91									
Number of Project Types																			
Mentioned 12+	62	79	56	42		47	78	80	74	82	39	52	75	77	83	71		54	
Mentioned 12-19	32							52		20			46	36	19				
Mentioned 20+	31	51	23	10		14	48		47	63	8	19		42	64	40	32	24	

* NOTE: LOW VOLTAGE (NET) - IN THIS TABLE - INCLUDES: NETWORKING, FIBER OPTICS, STRUCTURED WIRING/ CABLING, DATA CENTERS, TROUBLE SHOOTING/ MAINTENANCE OF LOW VOLTAGE SYSTEMS, LED LIGHTING, LIGHTING CONTROLS, HOME AUTOMATION, FIRE/LIFE SAFETY, SECURITY, HOME THEATER/ SOUND, AUTOMATED BUILDING SYSTEMS, INDUSTRIAL CONTROLS, SOUND AND VIDEO, PROGRAMMING AND COMMISSIONING, HVAC CONTROLS

In the same way that CII projects are the province of large firms, **Residential** projects are the bailiwick of small firms—those with 1–4 employees, but also those with 5-9 employees. There are also some differences between firms with 1–4 vs. those with 5–9 employees.

As we noted two and four years ago, what is particularly interesting here is that small firms perform so many aspects of Traditional Power/Lighting along with some aspects of Power Quality (Low-Voltage Troubleshooting and Maintenance), Sustainability (including Electric Vehicle Charging Equipment⁷ and non-LEED Projects), HVAC Controls or Mechanical and Low-voltage work, within the context of residential construction.

- In addition, firms with 5–9 employees are also more likely than average to work on Fire/Life Safety and Security in the context of residential construction.
- Firms with 5–9 employees are more likely than firms with 1–4 employees or larger firms to work on more aspects of Communications/Systems Connectivity within the context of Residential construction.

NECA member firms, which tend to be larger, are less involved in Residential projects. The one exception is Fiber Optics, where NECA firms are above average compared with non-NECA firms.

By revenue: firms with revenue under \$1 million follow the patterns of firms with 1–4 and 5–9 employees; that is, they are more involved with residential projects than are firms with revenues over \$2.5 million.

- By age: Contractors aged 65+ are more likely than average to work on Traditional Power/Lighting and on Maintenance/Service/Repair and Low-Voltage work.

As we note two years ago, firms that do residential work tend **not** to work on all of the project types or categories. In contrast, larger firms working in CII tend to work on many more project types compared with smaller firm.

On the next page:

Blank cells are no different than the average or total column. **Bolded** cells indicate that the percentage is statistically significantly higher than the average and the *italicized* cells are statistically significantly lower at the 90% level of

On the next page: Blank cells are no different than the average or total column. **Bolded** cells indicate that the percentage is statistically significantly higher than the average and the *italicized* cells are statistically significantly lower at the 90% level of confidence.

Pink is smaller than average and **green** is larger than average.

* NOTE: LOW-VOLTAGE (NET) IN THIS TABLE INCLUDES: NETWORKING, FIBER OPTICS, STRUCTURED WIRING/CABLING, DATA CENTERS, TROUBLESHOOTING/ MAINTENANCE OF LOW-VOLTAGE SYSTEMS, LED LIGHTING, LIGHTING CONTROLS, HOME AUTOMATION, FIRE/LIFE SAFETY, SECURITY, HOME THEATER/ SOUND, AUTOMATED BUILDING SYSTEMS, INDUSTRIAL CONTROLS, SOUND AND VIDEO, PROGRAMMING AND COMMISSIONING, AND HVAC CONTROLS.

⁷ This is a new finding: two years ago the smallest firms were not more likely than average to perform Electric Vehicle Charging Equipment projects. As of the 2024 Profile study, they are now more likely than average to do this kind of work.

Q.6 Specific Categories In Which Company Worked In 2023 - Residential (In Rank Res 070824)																		
Base: Total Respondents																		
	NECA Firm			Company Size (Employees Q.2A)							Company Size (Revenue Q.3)					Resp Age		
	TOTAL	YES	NO	1-4	5-9	1-9	10+	10-19	20-99	100+	<\$250K	\$250K-\$1M	\$1M-\$2.5M	\$2.5M-\$10M	\$10M+	35-54	55-64	65+
Total Answered	828	242	585	306	112	418	407	100	165	142	209	135	109	132	165	213	292	295
	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
<u>Mentioned Any</u>	63	46	71	85	79	84	43		42	27	87	79	72	54	27			69
Traditional Power/Lighting (Net)	61	44	68	83	75	81	41		40	25	86	76	70	51	26			66
Lighting (Sub Net)	59	43	66	81	70	78	40		40	23	82	73		50	25			
LED Lighting (Including Lamps, Fixtures And Controls)	56	40	62	75	67	72	39		38	23	78	67		48	24			
Lighting Fixtures	49	37	54	65	60	64	35		35	20	66	61	57		22			
Lighting Controls	39	31	43	48	51	49	30		32	20	51			20				
Lamps	38	29	42	51	48	50	27		29	15	56			19	44			
Ballasts Or Led Drivers	37	30	40	47	48	48	27		25	18	49	44		18				
Any Other Lighting Not Included Above	16				23					11				12	23			
Daylighting/Shading Systems	13														19			9
Power (Sub Net)	59	43	65	79	74	78	39		38	25	80	74	66	48	26			
Power	54	40	60	69	71	70	38		37	25	69	69	65	46	26			
Wire And Cable	52	40	57	67	71	68	36		35	24	67	66	60	25				
Other	43	31	48	58	51	56	29	51	28	15	57	50	55	34	18			49
Maintenance/Service/Repair (Any Electrical)	41	29	45	57	48	54	27	50	25	12	56	48	52	30	16	36		47
HVAC (Mechanical)	9	7	10		20	13	5		5	0	13		15	1				
Pre-Assembly/Pre-Fabrication Of Electrical Components	6				11													
Water Utilities Or Waste Water Treatment Plants	NA																	
Automation/Controls Systems (Net)	41	32	45	49	54	50	32		33	20	48	53	50	18				
Home Automation/Smart Home/Connectivity	25	19	28		38	31	20			11		36		10				
Fire/Life Safety (Including Alarms/Detectors)	24				30	26				15				33	12			
Security: Cctv/Access/Motion, Etc.	19	14	20		25	22	15			12		24		10				
HVAC Controls	15	11	16	21	25	22	8		7	3	23			8	3			
Home Theater/Sound Or VDV	14				21	17	10		10	6				7				11
Programming And Commissioning	7				13											11		4
Building Automation Systems/Facilities Connectivity	NA																	
Industrial Controls (Including Plcs And Vfds And Switchgear)	NA																	
Sound And Video Or VDV	NA																	
Sustainability	41	31	45	52	51	52	30	51	26	19	52	51	52	18				
Electric Vehicle Charging Equipment	31	25	34	37	41	38	24	44	19	15	36	40	41	15				
Energy Efficiency Projects/Upgrades (Non-Leed)	16	12	17	21	23	21	10			6		22		6				
Solar/Photovoltaics	10				18									7	14			
LEED Projects	10	7	11	12	15	13	6		5	6	14			4				
Energy Storage Systems	6			4	14								10					
Smart Or Net Metering	6				12					2				3				3
Energy Audits (Including Thermal Imaging)	4			2						1				8	1			
Cogeneration	3									1								
Geothermal	3				7					1				1				
Smart Grid Technology	2									1				1				
Microgrids	1							0										
Wind Generation	1			0	4					0								
Fuel Cells	1				4	2	0	0		0				0				
Power Quality (Net)	36	28	40	45	46	45	28	48	27	13	47	44	46	14				
Backup Power/UPS	23	17	25		32	27	18	33		8		30	32	8				
Troubleshooting/Maintenance Of Low Voltage Systems	20	16	22	25		25	14		12	10	27			9				
TVSS/Lighting Surge Suppression	18									8			26	10				
Energy Management/Power Quality	5			3	11					3				9	2			
Communications Systems/Connectivity (Net)	23	17	26		36	28	18			11		34		8				
Communications Systems/Connectivity (Net) - Minus Data Centers	23	17	25		36	28	18			11		33		8				
Structured Wiring/Cabling/Connectivity	18				29	21	15			8		27		25	7			
Networking (Voip/Wireless/Broadband, Etc.)	13				19	16	10			8				7	17			
Fiber Optics (Communications And Security)	4	7	3	2		3	6											3
Data Centers	4								1							7	2	
Any HVAC (Controls Or Mechanical)	17	11	20	23	30	25	9		8	3	25		25	10	4			
HVAC Controls And Mechanical	7				14	10	3		4	0	10			1				
Low Voltage Work (Net)*	60	43	68	81	74	79	42		42	25	82	74	68	53	26			65
<u>Number of Project Types</u>																		
Mentioned 12+	27				38	30	24	41		13			37	34	12			
Mentioned 12-19	21	17				23		36		8			30		7			
Mentioned 20+	6															10		

* NOTE: LOW VOLTAGE (NET) - IN THIS TABLE - INCLUDES: NETWORKING, FIBER OPTICS, STRUCTURED WIRING/CABLING, DATA CENTERS, TROUBLE SHOOTING/ MAINTENANCE OF LOW VOLTAGE SYSTEMS, LED LIGHTING, LIGHTING CONTROLS, HOME AUTOMATION, FIRE/ LIFE SAFETY, SECURITY, HOME THEATER/ SOUND, AUTOMATED BUILDING SYSTEMS, INDUSTRIAL CONTROLS, SOUND AND VIDEO, PROGRAMMING AND COMMISSIONING, HVAC CONTROLS

Blank cells indicate that the subgroup is not statistically different than the total sample.

Among firms working on **CII** projects:

- The largest firms—100+, but also 20–99—are most likely to work on CII projects. (This is indicated by the cells with bold percentage numbers and highlighted in green.)
- In contrast, firms with 1–4 employees are *below* average on all of the listed CII projects.
- Firms with 5–9 employees (which often act more like larger firms compared with firms with 1–4 employees) are more likely than average to work on Traditional Power/Lighting as an overall group and Power as an overall group and specifically on Wire and Cable.
- NECA firms, being larger, are above average on virtually all of the listed CII project types.
- The oldest electrical contractors, who tend to work for smaller firms, are below average on almost all of the listed CII projects.

* NOTE: LOW-VOLTAGE (NET) IN THIS TABLE INCLUDES: NETWORKING, FIBER OPTICS, STRUCTURED WIRING/CABLING, DATA CENTERS, TROUBLESHOOTING/ MAINTENANCE OF LOW-VOLTAGE SYSTEMS, LED LIGHTING, LIGHTING CONTROLS, HOME AUTOMATION, FIRE/LIFE SAFETY, SECURITY, HOME THEATER/ SOUND, AUTOMATED BUILDING SYSTEMS, INDUSTRIAL CONTROLS, SOUND AND VIDEO, PROGRAMMING AND COMMISSIONING, AND HVAC CONTROLS.

On the next page: Blank cells are no different than the average or total column. **Bolded** cells indicate that the percentage is statistically significantly higher than the average and the *italicized* cells are statistically significantly lower at the 90% level of confidence.

Pink is smaller than average and **green** is larger than average.

Low-Voltage: Firms' Active Engagement in Systems Integration or Data Centers

To put the following results into context, across the total sample, 95% of firms perform low-voltage work:

In the 2024 Profile Study, 26% of firms said that they currently have a separate low-voltage division, statistically unchanged from 2022 when it was 23%. As was the case two and four years ago, larger firms (those with 10+ employees) are more likely to have a separate low-voltage division (38% in 2024), statistically unchanged from two years earlier. As was the case in 2020, but not in 2022, larger firms are now once again more likely to plan to add a low-voltage division in the next 1–2 years (8% among firms with 10+ employees compared with 4% among firms with 1–9 employees).

More than one-half of the electrical contractors interviewed are actively involved in systems integration or data centers (56%): Low-Voltage Systems Integration was mentioned most often (48%). Design or Specification of Low-Voltage Systems received the next the next-most mentions at 36%, followed by Installation of Data or Telecom Centers (29%) and Commissioning and Programming (28%). Finally, 20% are involved in the Design or Specification of Data or Telecom Centers.

There were no statistically significant changes compared with two years earlier.

**Firm's Active Engagement in Systems Integration or Data/Telecom Centers
(Version 5_Q15 and Version 6_Q17 Total Sample in 2024 and in 2022)**

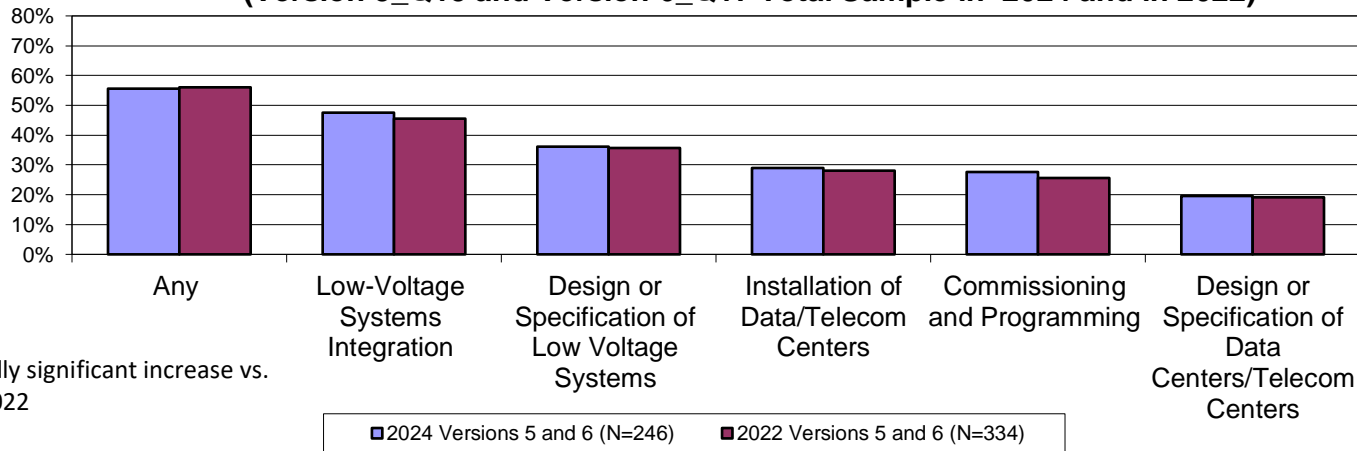


Table 257

(+) indicates a statistically significant increase vs. 2022

Roles Played by Firm in Integrated Systems, cont.

Electrical contractors were asked to indicate the extent to which they specify, install or both specify *and* install selected integrated systems.

Mirroring the findings from two years ago:

- 6 in 10 electrical contractors say that they both **specify *and* install** Lighting. As has been the case historically, this is about double the percent that *only* install.
- For most of the other integrated systems, the percentages that both specify *and* install is in the range of about 15% to 25%, with the exception of HVAC (not including controls), where it is 5%. Specifying without installing is in the single digits for all categories.

The only statistically significant differences pertain to specifying *and* installing: Fewer now specify and install in the case of Security and/or in the case of HVAC (not including controls).

Roles Played by Firm in Integrated Systems 2024 Profile Study				
	Specify <i>Only</i>	Install <i>Only</i>	Specify <i>and</i> Install	Don't Work in This Category
Version 7_Q17 Base (124)	%	%	%	%
Security	1	36	15 < 25 [2022]	48
Fire/Life Safety	2	31	25	42
Lighting (including Controls)	2	29	59	10
Communications (VDV, etc.)	2	31	27	40
Building Controls (including HVAC)	1	41	15	43
HVAC (Not Including Controls)	2	24	5 < 10 [2022]	69

Tables 207→210

> or < indicates significant difference from 2022 results; only significant differences are shown

▲ “WHERE” DO CONTRACTORS PERFORM THE WORK?

Number of States

About 4 in 10 electrical contracting firms perform their work in multiple states; as noted in the past, issues of licensing and certification may suppress working in multiple states. The proportion of electrical contracting firms working in 2 or more, 3 or more, 4 or more and 5 or more states are each statistically unchanged from 2022.

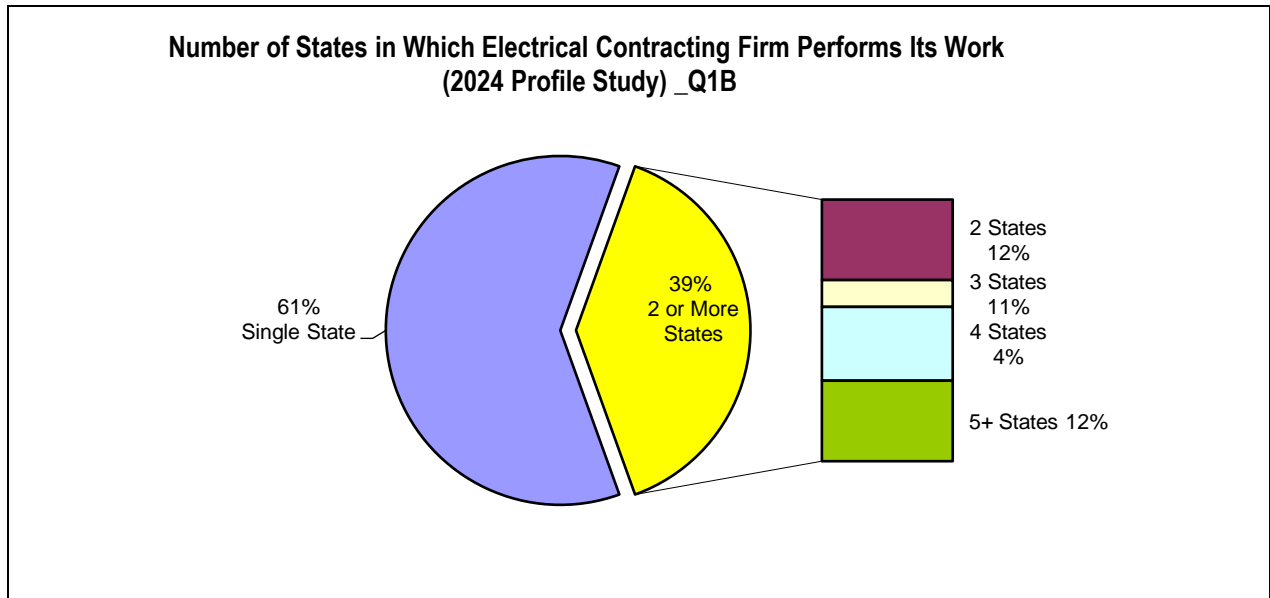


Table 3

Not surprisingly, larger firms are more likely to work in multiple states. This was also the case in earlier Profile studies.

Number of States in Which Electrical Contracting Firm Performs Its Work_ Trended					
(2024 Profile Study) Q1B					
	Total	1-4	5-9	1-9	10+
Work in 2+ states (2024)	39%	20%	< 29%	22%	< 56%
Work in 2+ states (2022)	40%	26%	< 33%	27%	< 57%
Work in 2+ States (2020)	36%	24%	< 34%	26%	< 56%
Work in 2+ States (2018)	33%	21%	< 35%	24%	< 55%
Work in 2+ States (2016)	32%	22%	< 30%	24%	< 54%
Work in 2+ States (2014)	31%	20%	< 37%	23%	< 55%

Bold percentages are significantly higher than *italicized* percentages in the direction of the arrow

Table 3

For the first time in 2024, respondents were asked about whether they work internationally. 5% of the total firms in the sample work internationally, rising to 17% among firms with 100+ employees. Canada, Mexico and Europe are mentioned most often among the small sample that work internationally.

Types of Work: By Sector (New Construction vs. Modernization/Retrofit vs. Maintenance/Service/Repair)

In the 2024 Profile study, on average, 37% of electrical contractor revenue comes from New Construction, 36% from Maintenance/Service/Repair, and 28% from Modernization/Retrofit. The percentage of revenue from New Construction posted a statistically significant *increase* (from 32% to 37%) while the percentage of revenue from Maintenance/Service/Repair *declined* from 39% to 36% due to a decline in Repair work from 18% to 15%.

- Although NECA member firms derive a statistically higher percentage of their revenue from New Construction (41%), it was the non-NECA firms that saw a statistically significant increase (from 30% to 35%) that was caused by *smaller* (1–9 employee) non-NECA firms (from 25% to 31%, not shown), whereas NECA member firms were statistically unchanged from 2022 (not shown).

Note that New Construction, which accounted for 43% of revenue on average in 2007 (not shown), has not yet recovered.

As was the case in earlier Profile studies, New Construction (the purple bar) plays a proportionally larger role to firms with 20+ employees than to smaller firms, while Maintenance/Service/Repair—on a combined basis—(the gold bar) accounts for a proportionally larger share of revenue among smaller firms. Maintenance *Contracts* continue to play a proportionately bigger role to larger companies.

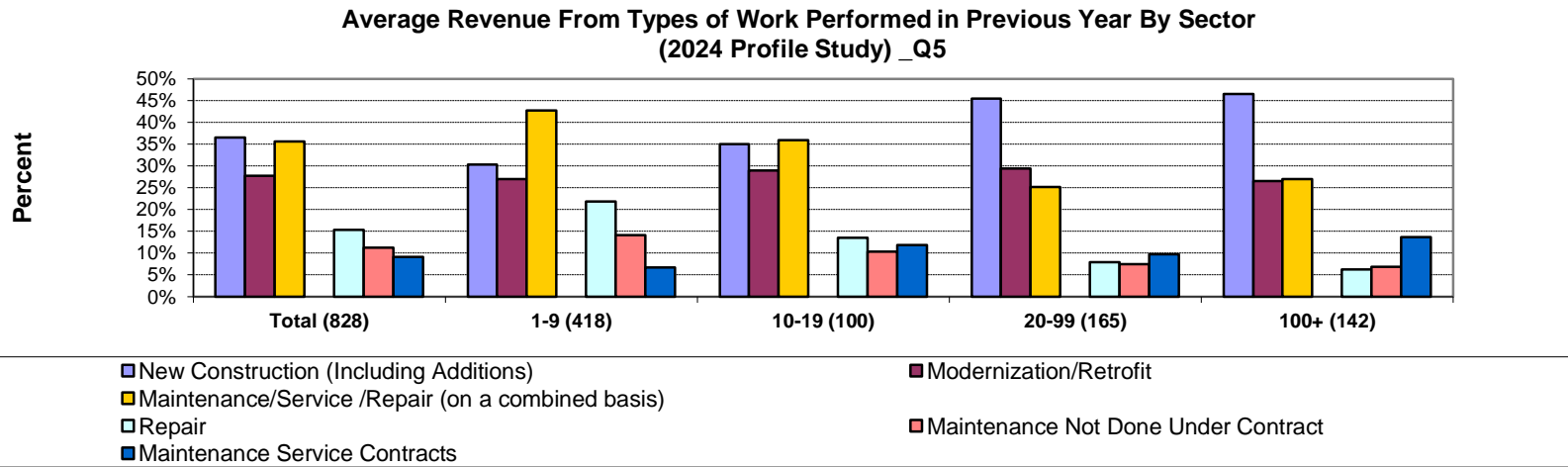


Table 32

Recall that the percentage of revenue from New Construction posted a statistically significant increase (from 32% to 37%) while the percentage of revenue from Maintenance/Service/Repair declined from 39% to 36% due to a decline in Repair work from 18% to 15%.

- The average percentage of revenue from New Construction *increased* in total and among firms with 1–9 employees, while the percentage of revenue from Maintenance/Service/Repair *declined* in total and among firms with 1–9 employees. The average percentage of revenue from Repair declined in total, but not in either of the two employee size breaks.
- There were no statistically significant differences in average revenue among firms with 10+ employees compared with two years ago.

Average Percent of Sales/Revenue from Specific Sectors (Q5)						
	Total		1-9 Employees		10+ Employees	
	2024	2022	2024	2022	2024	2022
New Construction	36.6% >	<i>31.8%</i>	30.3 >	<i>24.8%</i>	43.3%	40.5%
Modernization/Retrofit	27.7%	29.5%	27%	28.6%	28.3%	30.6%
Maintenance/Service/Repair	<i>35.7%</i>	< 38.7%	42.7%	< 46.6%	28.4%	28.9%
Repair	<i>15.4%</i>	< 17.5%	21.8%	24%	8.8%	9.3%
Maintenance/Service Contracts	9.1%	9.5%	6.7%	7.9%	11.7%	11.4%
Maintenance Not Done Under Contract	11.2%	11.8%	14.2%	14.6%	8%	8.2%

Table 32

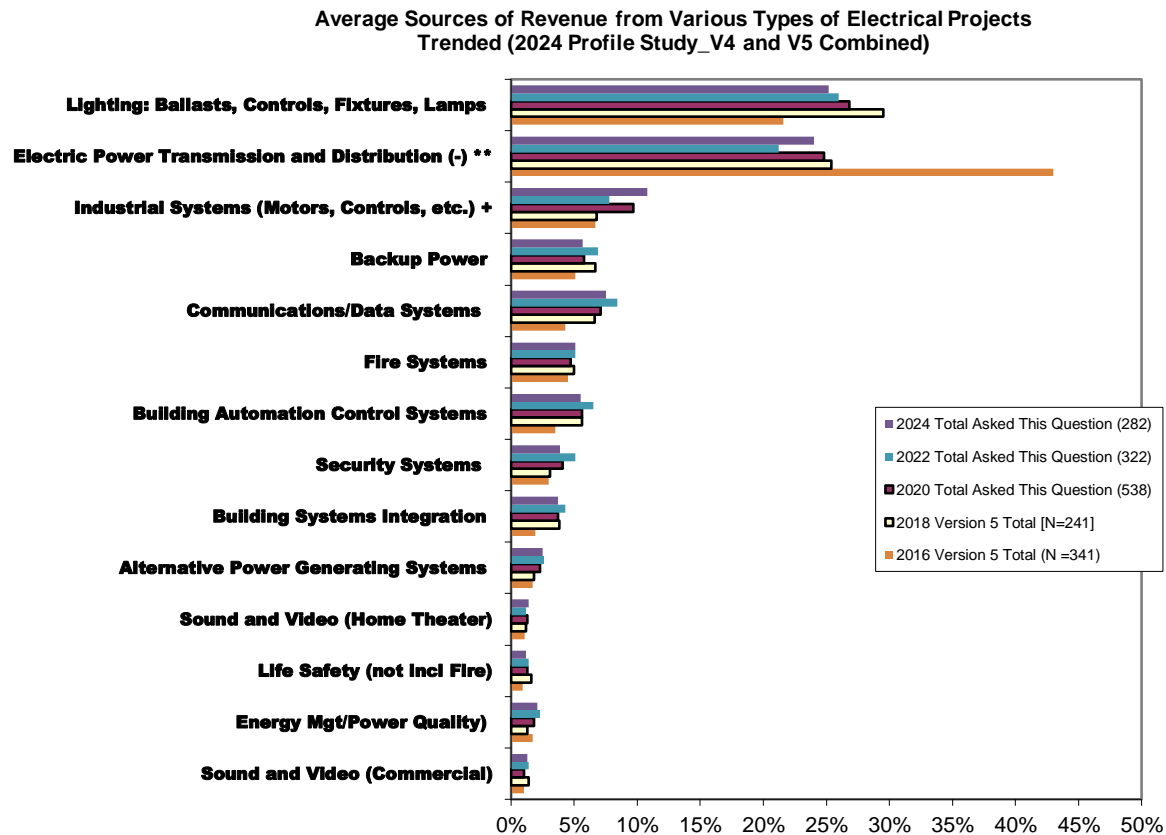
Bold percentages are significantly higher than *italicized* percentages in the direction of the arrow

The increase in average revenue from New Construction is attributable to non-NECA firms, which went to 35% in 2024 from 30% in the 2022 report (not shown).

Electrical contractors were given a list of 14 project types and were asked how much of their revenue came from each of these sources. The averages are shown below. This was the question that showed the dramatic shift away from Electric Power Transmission and Distribution to higher-value categories such as Lighting in 2016.

In 2024, the top three categories based on average revenue are Lighting Ballasts, Controls, Fixtures, Lamps (25%); Electric Power Transmission and Distribution (24%); and Industrial Systems (11%).

In the most recent wave, only Industrial Systems changed from two years earlier, posting a significant increase from 7.8% to 10.8%. [Table 255]

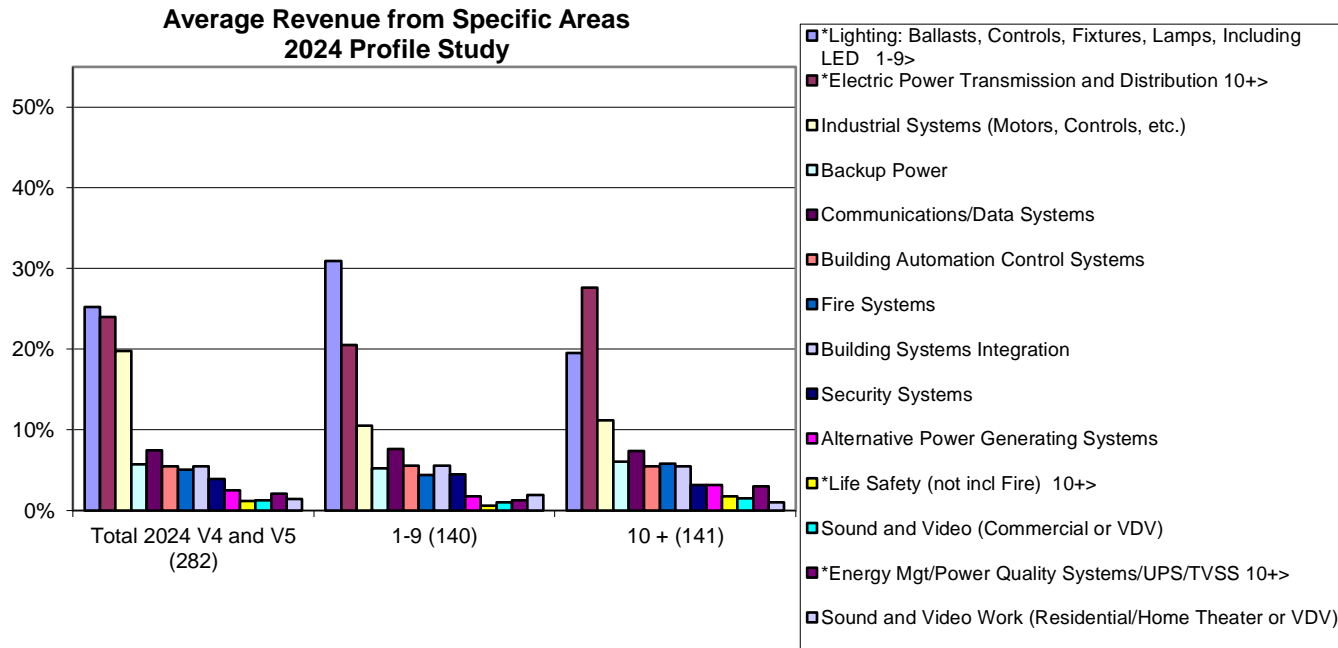


* Indicates significant increase between 2018 and 2020

** Indicates significant decrease between 2016 and 2018 + significant increase from 2022

This chart shows the sources of revenue by number of employees. For example, as was the case two years ago, Lighting plays a larger role to firms with 1–9 employees than to firms with 10+ employees, while Electric Power Transmission and Distribution, Energy Management, and Life Safety systems and play a proportionally larger role to firms with 10+ employees than to firms with 1–9 employees.

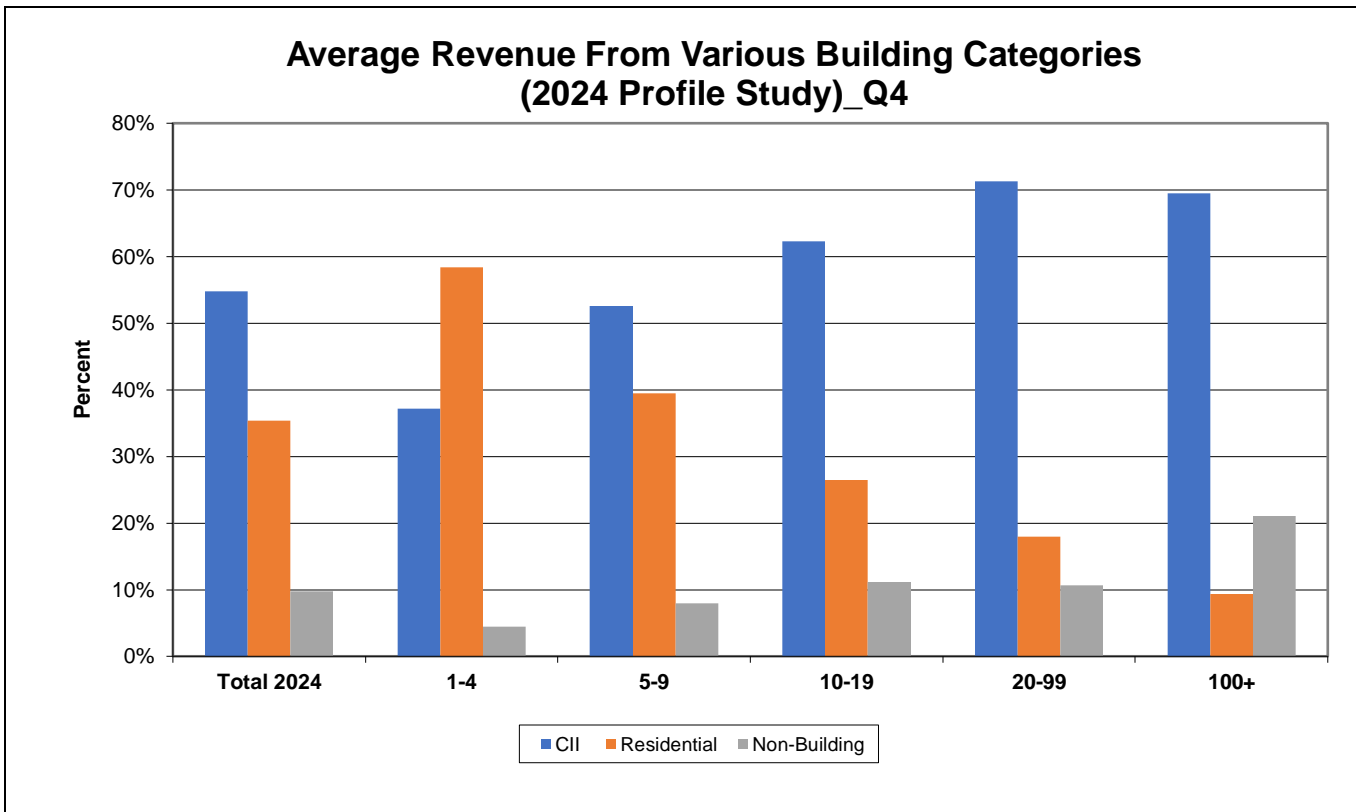
Please see the legend for the few subgroup differences that emerged (indicated by *).



Work in Various Building Categories (Residential vs. CII and Nonbuilding)

Across the total sample, electrical contractors continue to get more of their average revenue from CII (Commercial, Industrial, Institutional and Public Places), 55% on average, than from Residential projects, 35% on average. Nonbuilding projects (Transportation/Lighting and Utility) account for about 10% of contractors' business. CII and Nonbuilding account for more average revenue for the largest firms (20+ employees) in the case of CII and 100+ employees in the case of Nonbuilding compared to smaller firms.

Table 23



As shown in the table below, there are no statistically significant differences in the proportion of revenue from these three building categories compared with two years earlier among the total sample or by subgroup.

Average Revenue in Previous Year From Specific Categories (Q4)

	TOTAL		1-9		10+		10-19		20-99		100+	
	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022	2024	2022
	(828)	(843)	(418)	(471)	(407)	(371)	(100)	(109)	(165)	(143)	(142)	(120)
	%	%	%	%	%	%	%	%	%	%	%	%
TOTAL C/I/I	54.8	55.1	41.3	42.0	68.5	71.7	62.3	65.6	71.3	73.7	69.5	74.9
TOTAL RESIDENTIAL	35.4	36.1	53.4	52.3	17.1	15.6	26.5	27.5	18.0	13.5	9.4	7.2
TOTAL NON-BUILDING	9.8	8.8	5.3	5.7	14.4	12.7	11.2	6.8	10.7	12.8	21.1	17.8

Table 23

CII = Commercial (Offices, Stores, Hospitality, etc.); **Institutional** (Schools/Hospitals/Stadiums/Parks/Terminal/Cultural/Correctional, etc.); **Industrial** (Manufacturing Plants/Process Industries/Factories/Warehouses, etc.); **Residential**: Single Family; Multifamily (1-5 stories); Multifamily (6+ stories); **Non-Building**: Line Work (Overhead/Underground Construction/Transmission & Distribution/Maintenance and Repair, Transportation Lighting, and Communications (Airport Runway/Highway/Street Lighting including Parking Garages and Traffic Controls/Electric Signage/Traffic Calming Signs); Power Generation and/or Substations; Distributed Generation/Alternative Energy; Smart Grid; Electric Vehicle Charging Equipment; Energy Storage was first added in 2016.

Bold percentages are significantly higher than *italicized* percentages in the direction of the arrow.
 +/- next to the data labels indicate statistically significant differences from 2022 among the total sample.

Types of Residential and CII Work Performed

As of the 2024 Profile Study, the average percentage of contractor revenue from Commercial and Single-family housing is about equal among the total sample (29%), although neither category has posted a significant change since two years ago. However, average revenue from Single-family construction has been trending down since 2018 when it was 38.4%, while Commercial construction has consistently accounted for about 27% to 29% of average revenue. Within the housing category, a higher percentage of revenue comes from Multifamily housing with 1–5 stories compared with taller Residential buildings. This was also the case for at least the last six years.

As was also the case in the recent past, within the broad CII category, a greater percentage of electrical contractors’ revenue is from commercial construction (29%) than from Industrial (15%) or Institutional projects (11%).

Compared to two years ago, among the total sample, three categories posted increases—Multifamily housing (6 + stories), Line Work and Electric Vehicle Charging Equipment—while nothing declined.

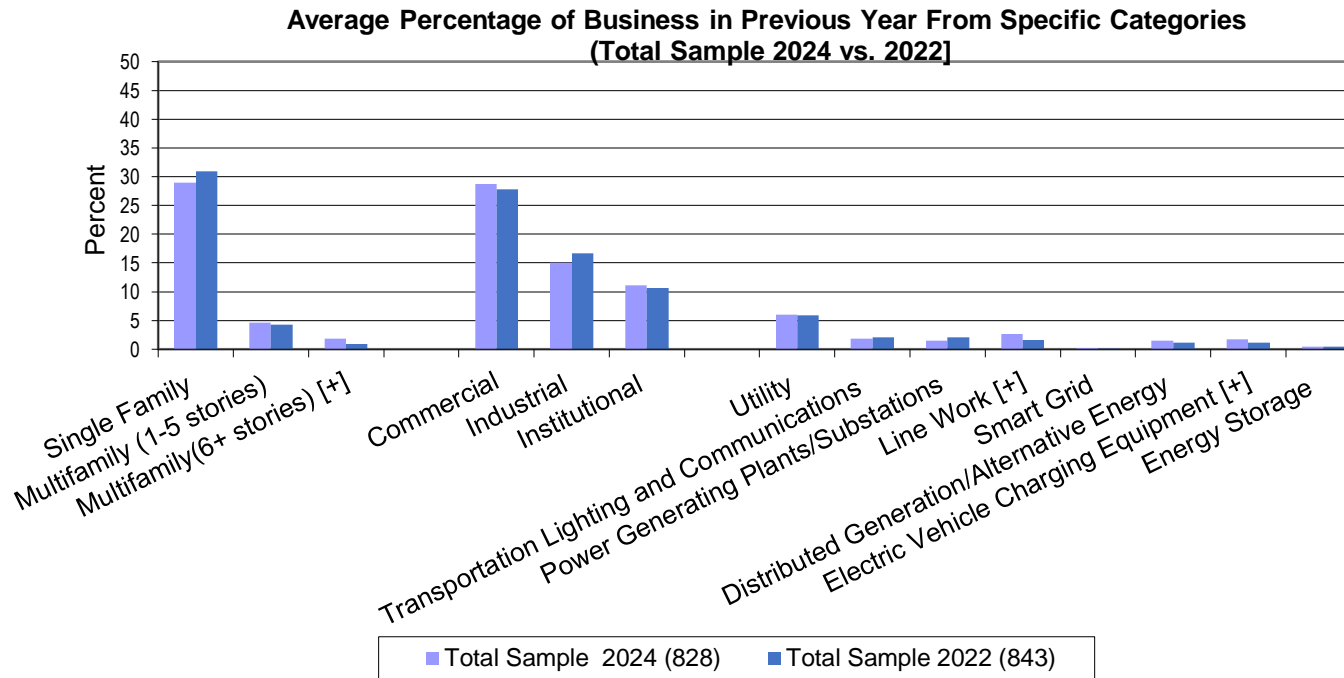


Table 23

+/- next to the data labels indicate statistically significant differences from 2022 among the total sample.

As noted in previous Profile reports, while Single-family projects account for a high percentage of revenue across the total sample, this type of work is extremely important to electrical contracting firms with 1–9 employees. On average, these small firms derive almost one-half of their revenue (48%) from Single-family projects.

- Electrical contracting firms with 10–19 employees derive the greatest percentage of their revenue from Commercial projects, as do all firms with 10 + employees. Firms with 20+ employees derive a disproportionate percentage of their revenue from Industrial work and Institutional work.
- In addition, electrical contracting firms with 100+ employees get a disproportionate percentage of their revenue from Nonbuilding/Utility work. Note that Utility accounts for about two-thirds of the Nonbuilding category (6% of 9.8%, not shown).

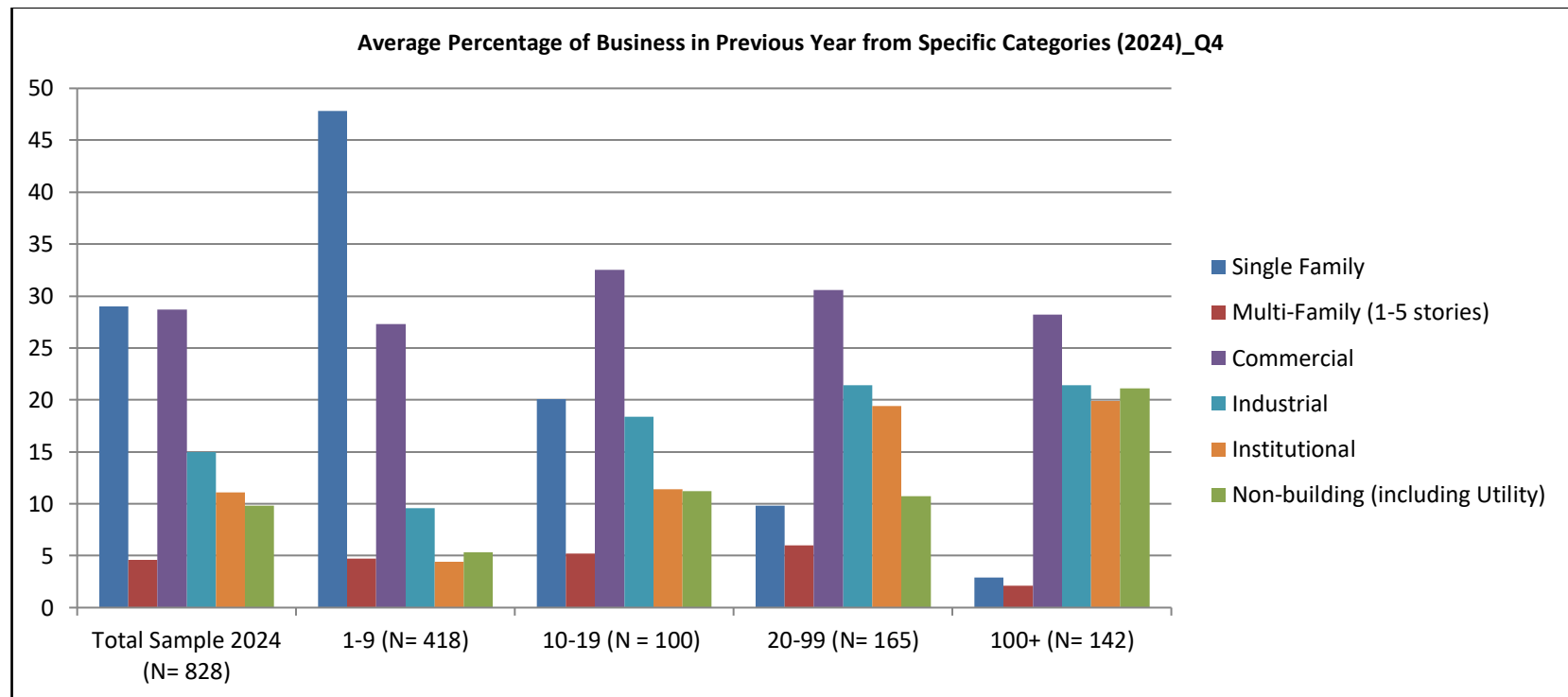


Table 23

▲ ”HOW” DO CONTRACTORS PERFORM THEIR WORK?

Roles in Specification/Types of Project Delivery (Design-Build or Design-Assist)

Compared with two and four years ago, the way that electrical contractors bid jobs is remarkably consistent: Time and Materials, and Maintenance, Service and Repair—both added in the 2020 Profile Study, based on their high number of volunteered mentions in 2018—were once again mentioned most often.

- The only statistically significant difference is Collaborative Building, which once again posted a significant increase, but off of a relatively small base.
 - Unlike two years earlier, when Design-Assist *rose* between 2019 and 2021, there is no statistically significant difference between 2023 and 2021 on this measure (not shown). The percentage performing *any* Design-Build work held steady, currently at 56% (not shown).

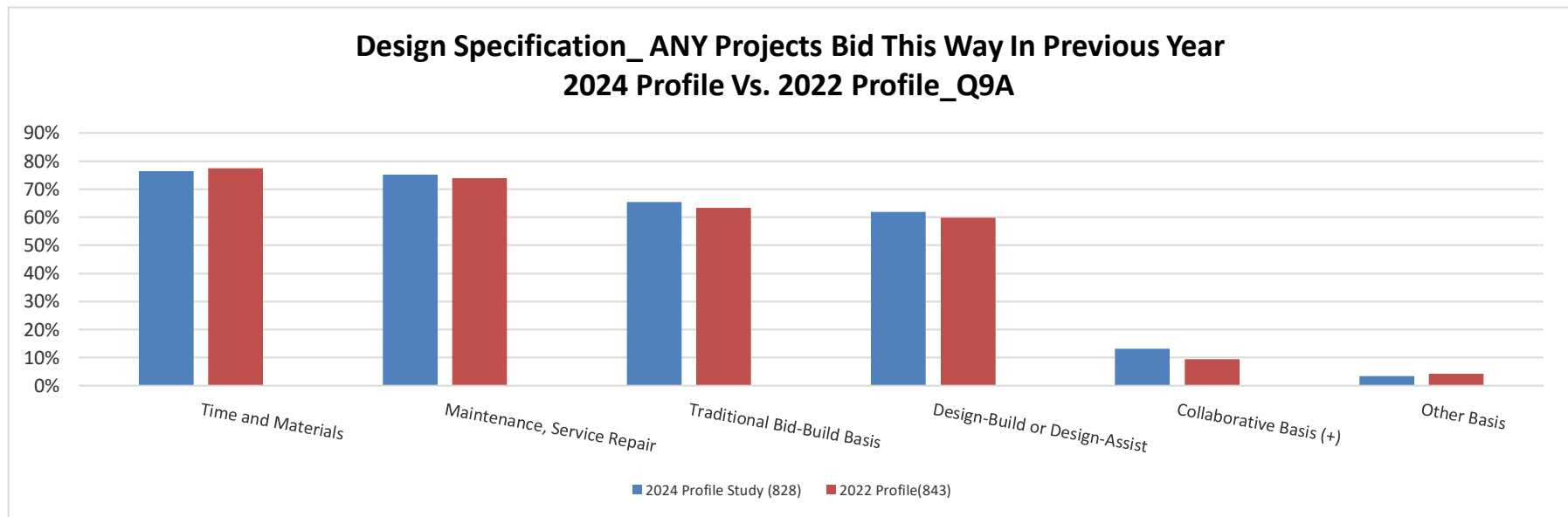


Table 54

(-) and (+) indicate statistically significant differences from the 2022 Profile Study.

The chart on the previous page shows whether the electrical contractor does *any* work on this basis. The next few pages focus on the *amount* of work done, expressed as average revenue.

As shown below, on average, the top three design specifications are Traditional Bid-Build (28%), Time and Materials (23%) and Design-Build or Design-Assist (25%). Maintenance, Service and Repair (on a combined basis) accounts for an average of 20%. Only about 4% of projects were bid on a Collaborative basis or on some “Other” basis in 2023.

Compared with two years earlier, Time and Materials accounts for slightly but significantly less average revenue, while Collaborative basis accounts for more average revenue (on a much smaller base).

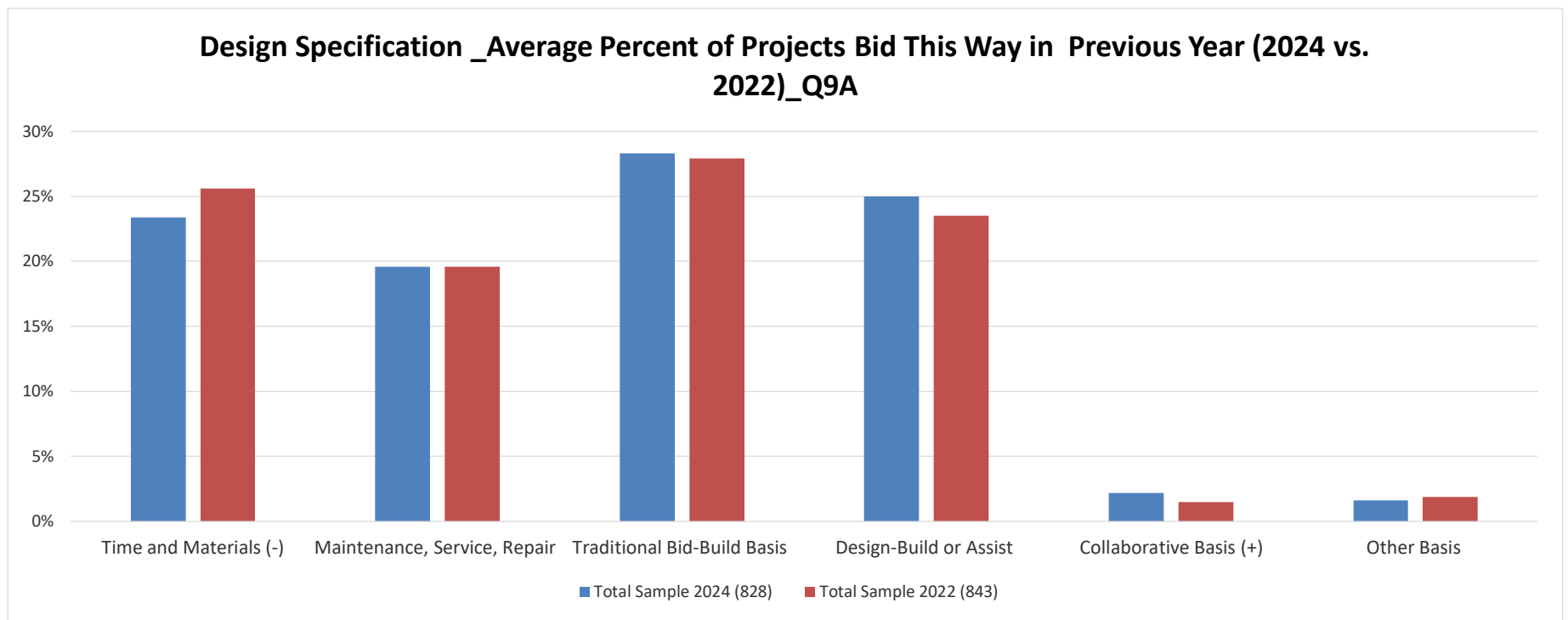


Table 53

(-) and (+) indicate statistically significant differences from the 2022 Profile Study.

As was the case two years ago, smaller firms get significantly more of their average revenue from Time and Materials and/or from Maintenance Service or Repair compared with larger firms. In contrast, larger firms get significantly more of their average revenue from Traditional Bid-Build projects, projects bid on a Design-Build or Design-Assist basis, and to a much lesser extent, on a Collaborative basis compared with smaller firms.

Design Specification _Average Percent of Projects Bid This Way in 2023								
Table 53-1, Q9A	Total	1-4	5-9	1-9	10+	10-19	20-99	100+
	%	%	%	%	%	%	%	%
Traditional Bid-Build	28.3	17.7		20.7	< 36.2		40.6	33.8
Design-Build or Design-Assist	25	16.2		18.4	< 31.6		30.5	35.6
Time and Materials	23.4	35.5		32.8	> 13.8		11.4	11.4
Maintenance, Service and Repair	19.6	27.8		25.5	> 13.5		12.9	11.6
Collaborative Basis	2.2	1.4		1.5	< 2.9	0.8		5.5

Table 53

Empty cells are not significantly different from the total sample

Bolded numbers and *italicized* numbers indicate a significant difference from the total.

An arrow > or < indicates a significant difference between a mutually exclusive pair.

Note the relative importance of Design-Assist in the 2024 Profile Study among firms with 100+ employees.

- This was also the case in the 2018, 2020 and in 2022 Profile Studies (not shown).

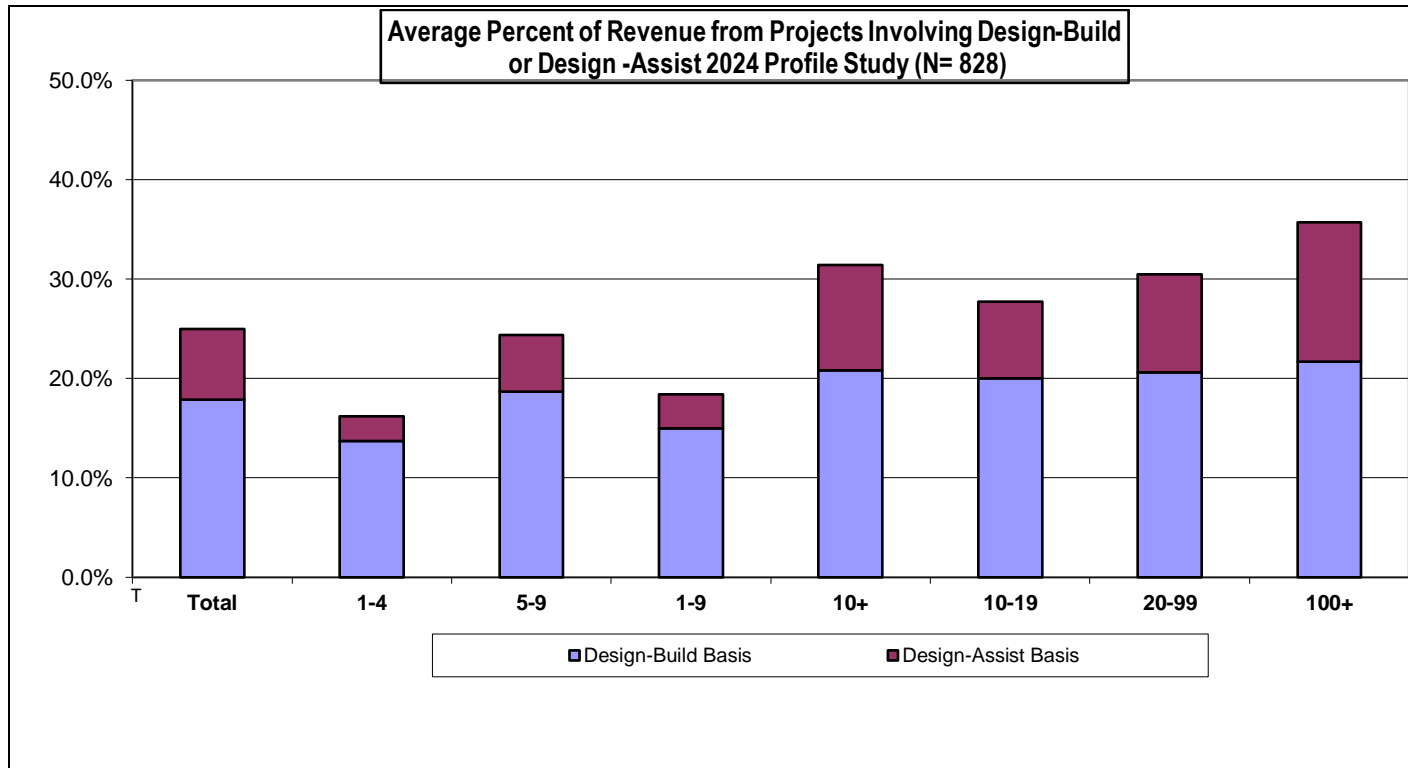


Table 53

Building Information Modeling (BIM)

Electrical contractors were asked to estimate the percentage of the time that they or someone in their firm uses Building Information Modeling (BIM). This question was first asked in the 2012 Profile Study.

More recently, across the total sample, the use of BIM had been fairly steady between 2012 and 2018. “Any” use has been rising sharply, steadily and significantly between 2020 and 2024. Average use held steady between 2020 and 2022, but rose sharply and significantly between 2022 and 2024.

Use of Building Information Modeling (BIM)_Q9B														
	2024		2022		2020		2018		2016		2014		2012	
Any vs. Average Use	Any	Average	Any	Average	Any	Average	Any	Average	Any	Average	Any	Average	Any	Average
Survey Year (Current Use)	↑35.8	↑12.1	↑31.1	9.2	↑27.2	↑8.2	22.1	6.5	22.3	6.0	23.7	7.1	20	5.8

Table 55

↑ indicates a statistically significant increase compared with two years earlier.

Once again in 2024—as we’ve mentioned since 2016—looking at BIM usage among the total sample obscures a larger finding: that while BIM usage is low among firms with 1–4 employees, it increases as firm size increases. The increase in “Any” use and average use is evident among firms as small as 5–9 employees or 10–19 employees, but the increase is really dramatic among firms with 100+ employees.

- As was the case two years ago, although “Any” BIM usage rose significantly among the total sample compared to two years ago, none of the individual employee size subgroups (1–4, 5–9, etc.) posted significant increases.
- In contrast, average use rose significantly among the total sample as it did among firms with 1–4 and 1–9 employees compared with two years earlier.

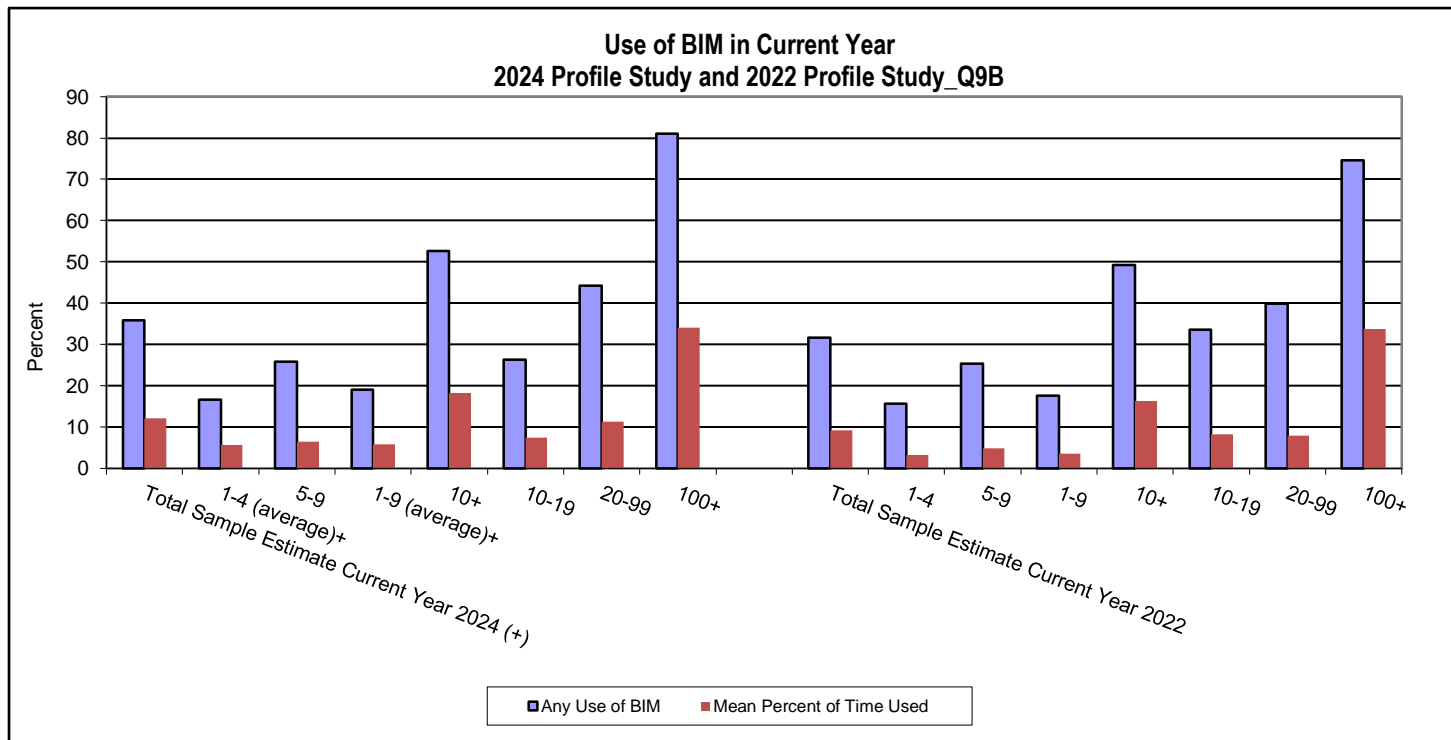


Table 55

(-) and (+) indicate statistically significant differences from the 2022 Profile Study.

Completeness and Correctness of Plans and Specifications

The prevalence of incomplete and incorrect plans and specs is quite high, particularly on “Any” basis.

- Across the total sample, about 8 in 10 electrical contractors said that they receive ANY **incomplete** plans and specs (79%, statistically unchanged from two years earlier). On average, 38% of the plans and specs that they received were incomplete, statistically unchanged from two years earlier.
- Across the total sample, approximately the same proportion—8 in 10—electrical contractors said that they receive ANY **incorrect** plans and specs (83%, statistically unchanged from two years earlier). On average, 35% of the plans and specs that they had received were incorrect, also statistically unchanged from two years earlier.

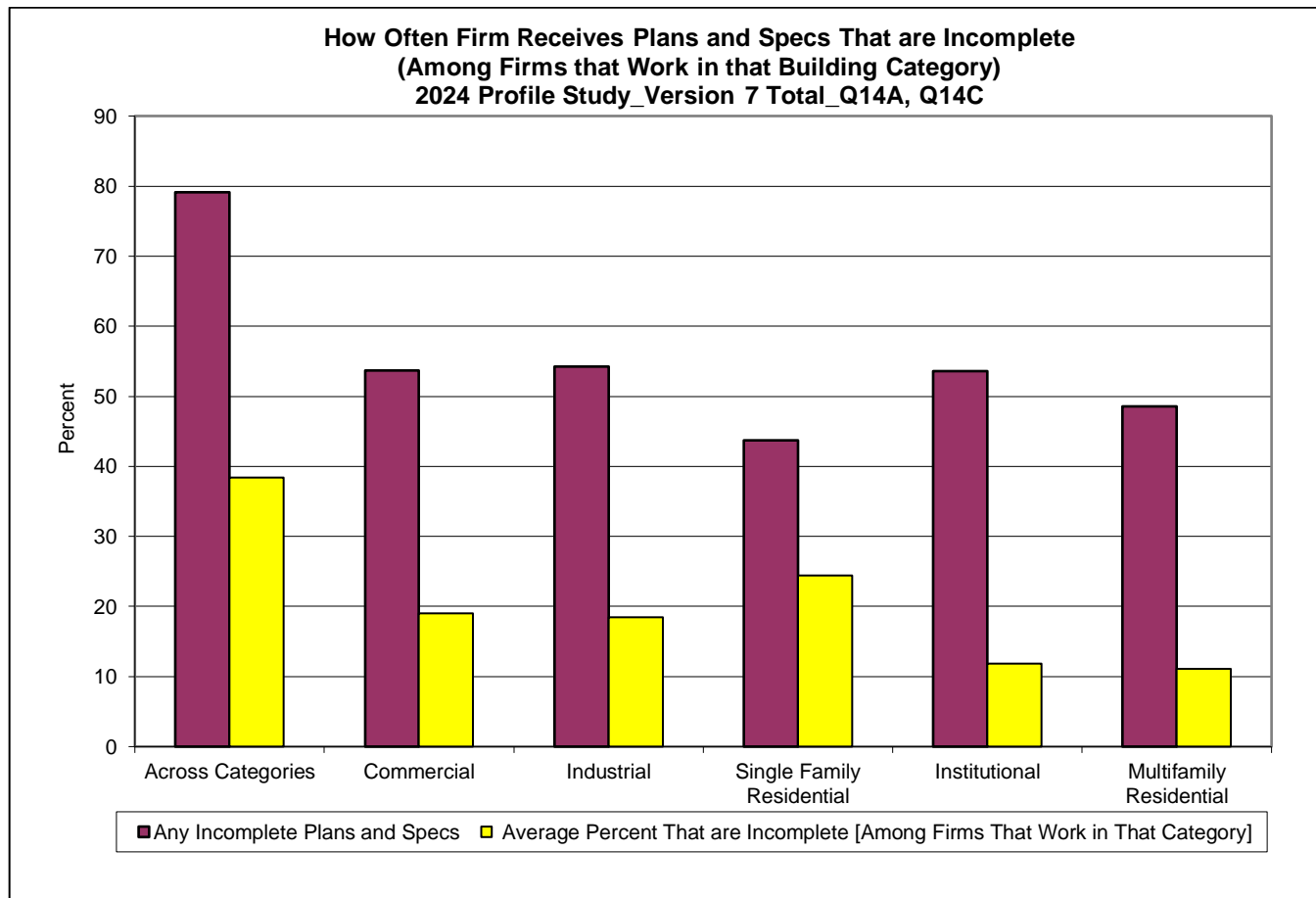
The presence of incomplete and incorrect plans and specs provides a greater opportunity for electrical contractors to influence/make brand decisions.

Version 7, Q14A and Q14B	Completeness and Correctness of Plans and Specs			
	ANY		Mean	
	2024	2022	2024	2022
	(129)	(163)	(129)	(163)
<i>Incomplete</i> Plans and Specs	79%	79%	38%	37%
<i>Incorrect</i> Plans and Specs	83%	78%	35%	31%

Tables 168, 169

Incomplete Plans and Specs: Although almost 80% of electrical contractors report receiving ANY **incomplete** plans and specs, the percentage varies somewhat by building type, within a 10-point range (from 54% in the case of Commercial, Industrial and Institutional construction to 49% in the case of Multifamily construction and 44% in the case of Single-family construction). The mean percentage of incomplete plans and specs also varied within a 13-point range from 24% in the case of Single-family construction to 11% in the case of Multifamily construction. In reality though, in terms of means, Single-family, Commercial and Industrial are at the higher end of the scale, while Multifamily and Institutional are at the lower end of the scale. This was also the case two years ago.

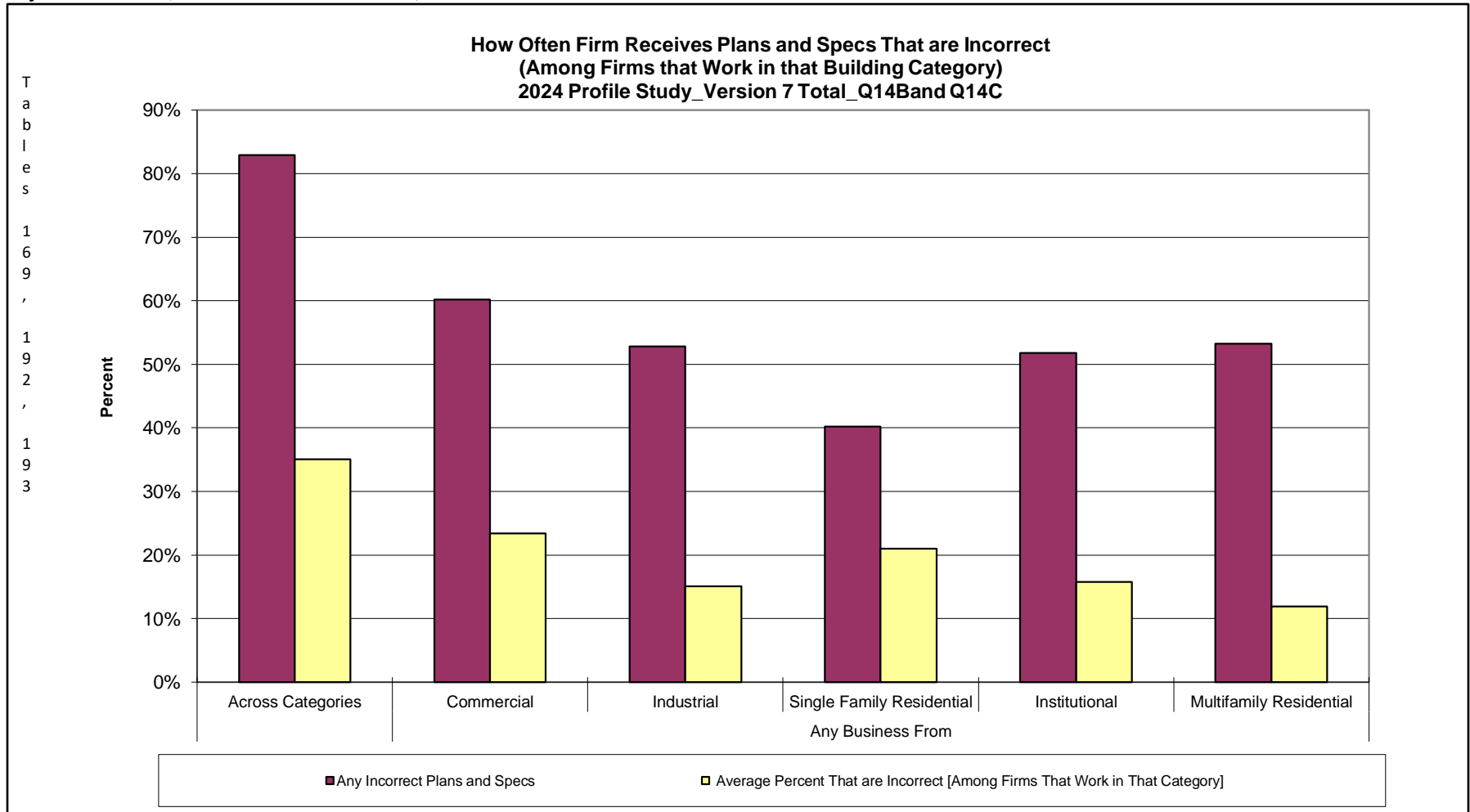
- Compared with two years ago, significantly *fewer* electrical contractors reported receiving ANY incomplete plans and specs in the case of Commercial and/or Single-family housing, according to those who work in those categories. There were no statistically significant differences in the case of Institutional, Industrial or Multifamily plans and specs (trended data not shown).



Tables 168, 180-181

Incorrect Plans and Specs: Although 83% of electrical contractors report receiving ANY **incorrect** plans and specs, the percentage varies somewhat by building type, within a 20-point range (from 60% to 40%). The mean percentage of incorrect plans and specs varied within an 11-point range from 23% in the case of Commercial construction to 12% in the case of Multifamily housing. Commercial and Single-family housing are at the higher end of the average scale, while Institutional and Industrial are in the middle of the scale and Multifamily housing is at the lower end.

- Compared with two years ago, significantly *fewer* electrical contractors reported receiving incorrect plans and specs in the case of Single-family housing, according to those who work in those categories. None of the other categories posted a statistically significant change compared with two years earlier (trended data not shown).



Role of Engineers Within Electrical Contracting Firms

Starting with the 2016 Profile Study, electrical contractors were asked about the professional relationship(s) that their firm has with engineers:

- Consulting Relationship, that is, the engineer is *not* on staff
- On staff or in a separate engineering division
 - These questions were asked independent of each other, since we did not want to assume that one type of relationship would rule out the other.

In the current wave, across the total sample, about 6 in 10 firms (59%) have a professional relationship with an engineer, statistically unchanged from the 2022 Profile Study level of 60%.

- As in the past, among the total sample in 2024, Consulting Relationships continue to be more prevalent (55%, statistically unchanged from the 2022 level of 55%). In addition, 25% report having an engineer on staff and/or having a separate engineering division, which is also statistically unchanged from two years earlier. About one in five (21%) have *both* a consulting relationship as well as having an engineer on staff or a separate engineering division. Once again, this is statistically unchanged from the 2022 findings.

Not surprisingly, the practice of working with engineers is far more common among larger firms. As shown on the next page, larger firms (10+ employees) are significantly more likely than smaller firms (1–9 employees) to work with engineers in each capacity.

- Further, the prevalence rises with firm size. This is especially noticeable among firms with 100+ employees, where the level rises to 92% (not shown). However, even among firms with 1–4 employees, 37% have a professional relationship with an engineer (not shown).⁸

There are no statistically significant differences among the total sample, firms with 1–9 employees, or firms with 10+ employees compared with two years earlier.

- Having an engineer on staff posted a large and statistically significant increase compared with two years earlier (from 27% to 42%), as did the percentage of firms that both have an engineer on staff *and* who also have a consulting relationship with an engineer (from 19% to 37%).

As we've noted in previous reports, the high prevalence of working with engineers speaks to the complexity of much of the work performed by electrical contractors.

⁸ For this question, the base sizes for subgroups other than 1–9 and 10+ are small and the findings about these subgroups should be viewed as suggestive.

Professional Relationship with Engineer(s)—Trended w/ Subgroups								
V7_15A/B		2024 Profile Study			2024 Profile Study	2022 Profile Study	2024 Profile Study	2022 Profile Study
	TOTAL	1-9	10+		1-9	1-9	10+	10+
	(133)	(69)	(64)		(69)	(100)	(64)	(63)
	%	%	%		%	%	%	%
Any Professional Relationship	59	<i>40</i>	< 80		40	46	80	83
Consulting (Not on staff)	55	<i>37</i>	< 75		37	43	75	75
On staff/separate division	25	<i>10</i>	< 42		10	16	42 >	27
Both	21	8	< 37		8	13	37 >	19

Table 194

Bold (Higher) and *italicized* (lower) percentages are significantly different than the total.

Arrows < and > indicate significant differences between pairs.

Project Collaboration/Level of Influence

Similar to recent Profile Studies, in 2024 almost 8 in 10 electrical contractors continue to report having a “high” or “medium” ability to influence the overall electrical design or specifications with building owners and/or design team members.

- About 4 in 10 describe their level of influence as “high”—42%—while about one-third—35%—characterize their level of influence as “medium.”
- There are no meaningful differences by company size (1–9 vs. 10+) [Not shown].
 - There are no statistically significant differences compared with two years earlier, either among the total sample or among firms with 1–9 or 10+ employees [Not shown].

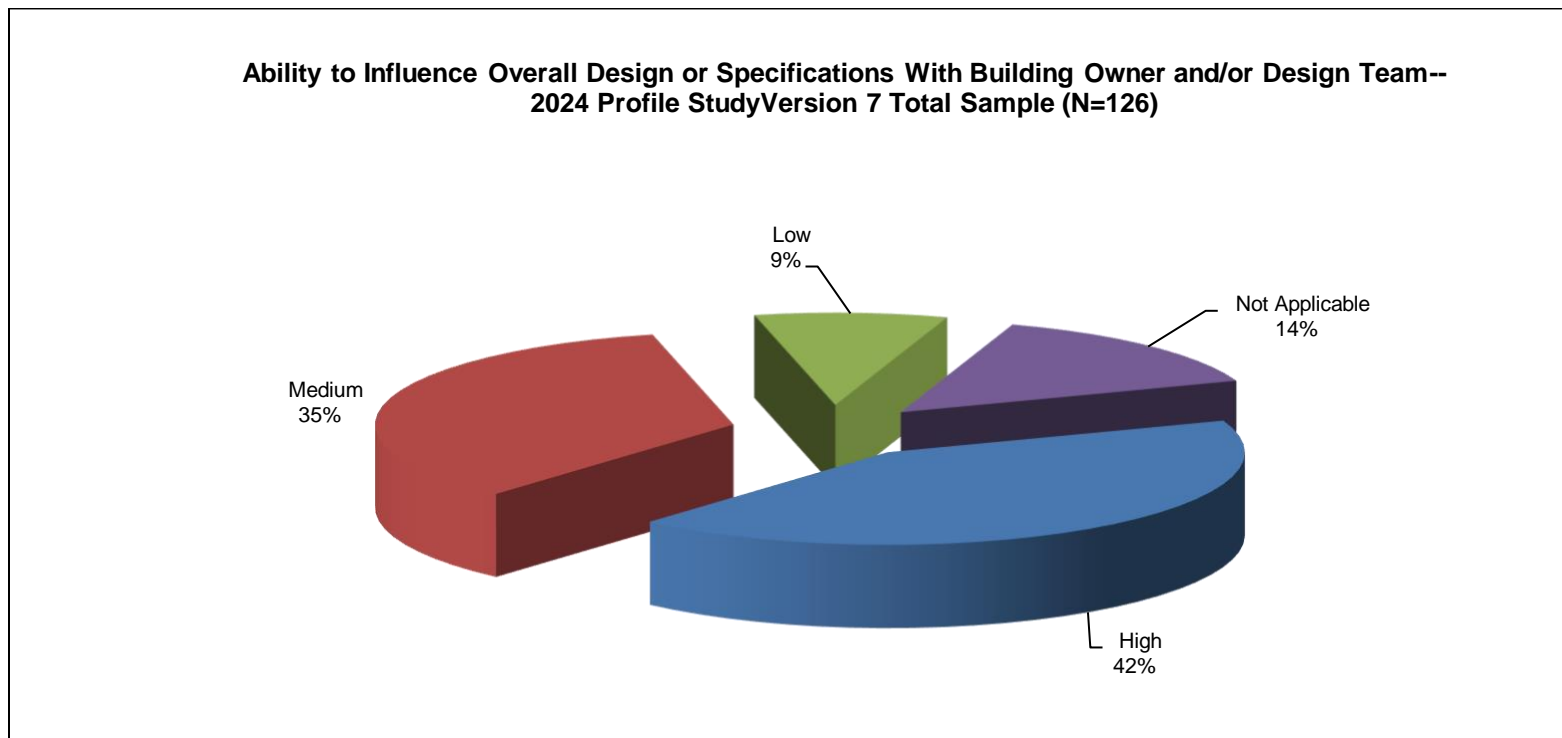


Table 195

Brand Specification Options

Respondents were shown a list of four options and were asked what percentage of specifications that their company receives falls into each category. On average, a “single” or proprietary brand is specified about 30% of the time, as are multiple brands and “or equal to.” Performance specified is lower at 12% on average.

- There are subgroup differences for two of the specification options: a single or proprietary brand is specified significantly more often to smaller firms (37% vs. 19% for firms with 10+ employees), while multiple brands are specified significantly more often to larger firms (36% among larger firms compared with 27% among firms with 1–9 employees). There are no other statistically significant differences between firms with 1–9 and 10+ employees in terms of brand specification options.
- There are no statistically significant differences among firms with 1–9 or 10+ employees compared with two years earlier.

**Average Percent of Projects That Were Bid Using This Type of Specification
2024 Survey Results_Version 6**

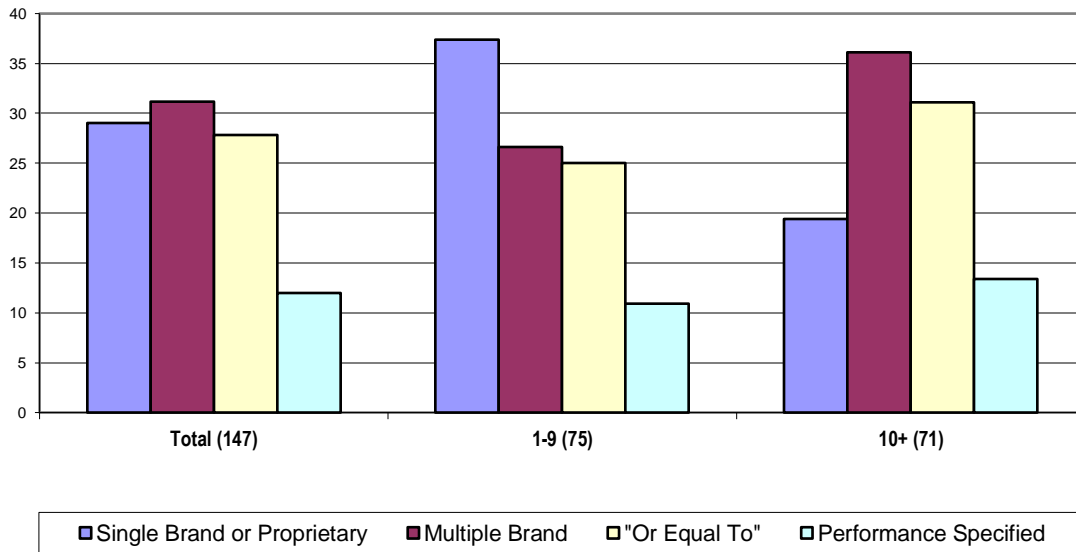
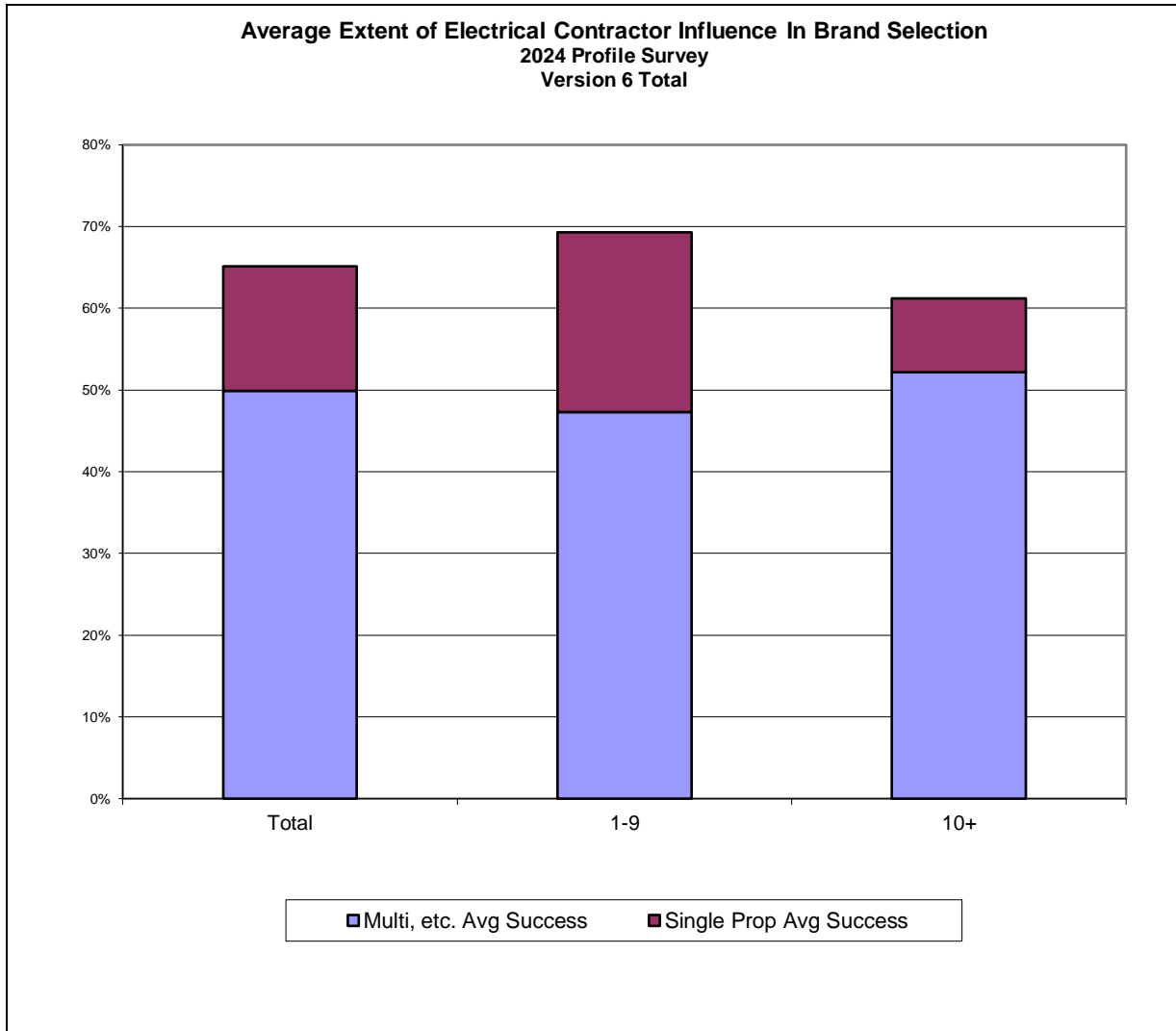


Table 152

Respondents were then asked how much discretion they have in making a brand selection. Overall, contractors are able to make the brand selection 65% of the time; 69% in the case of firms with 1–9 employees and 61% in the case of firms with 10+ employees.

- These percentages are consistent with what was reported two years ago.



Tables 152,154, 160

“Where a ‘single or proprietary’ specification is indicated, what percentage of the time are you or someone in your firm able to successfully make a substitution?”

“Where ‘multiple or equal or performance’ specification is indicated, what percentage of the time do you or someone in your firm make the brand decision for installation?”

Main Reasons for Original Brand Selection and Substitution

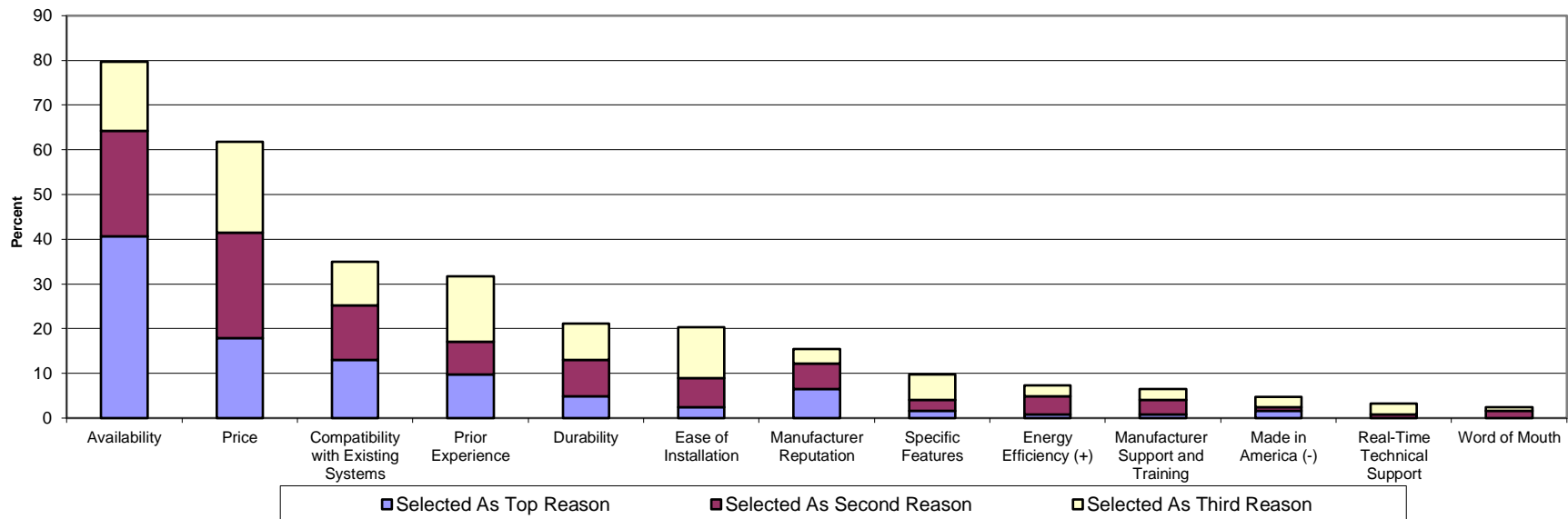
Original Brand Selection: Among the total sample, Availability and Price trump all other attributes as a top-3 reason for original brand selection. Note that as a first choice, Availability completely overshadows all other attributes (this has been the case since at least the 2014 Profile Study).

Compatibility with Existing Systems, which was first asked in 2014, has resonance with 35% of electrical contractors. It continues to be essentially comparable with Prior Experience. Ease of Installation, Durability and Manufacturer Reputation form the next tier. Each scores between 21% and 15% on a top-3 reason basis.

These attributes score in the single digits on a top-3 reason basis: Specific Features, Energy Efficiency, Manufacturer Support and Training, Real-Time Technical Support, Made in America and Word-of-mouth.

- Price receives substantially and significantly more mentions among firms with 10+ employees compared with smaller firms (71% on a top-3 features basis compared with 52% among firms with 1–9 employees.)

Top 3 Reasons for Original Brand Selection
Base: 2024 Version 6_Q16B Total (N=123)



(-) or (+) indicates a significant difference between 2024 (N = 123) and 2022 (N=159) Totals

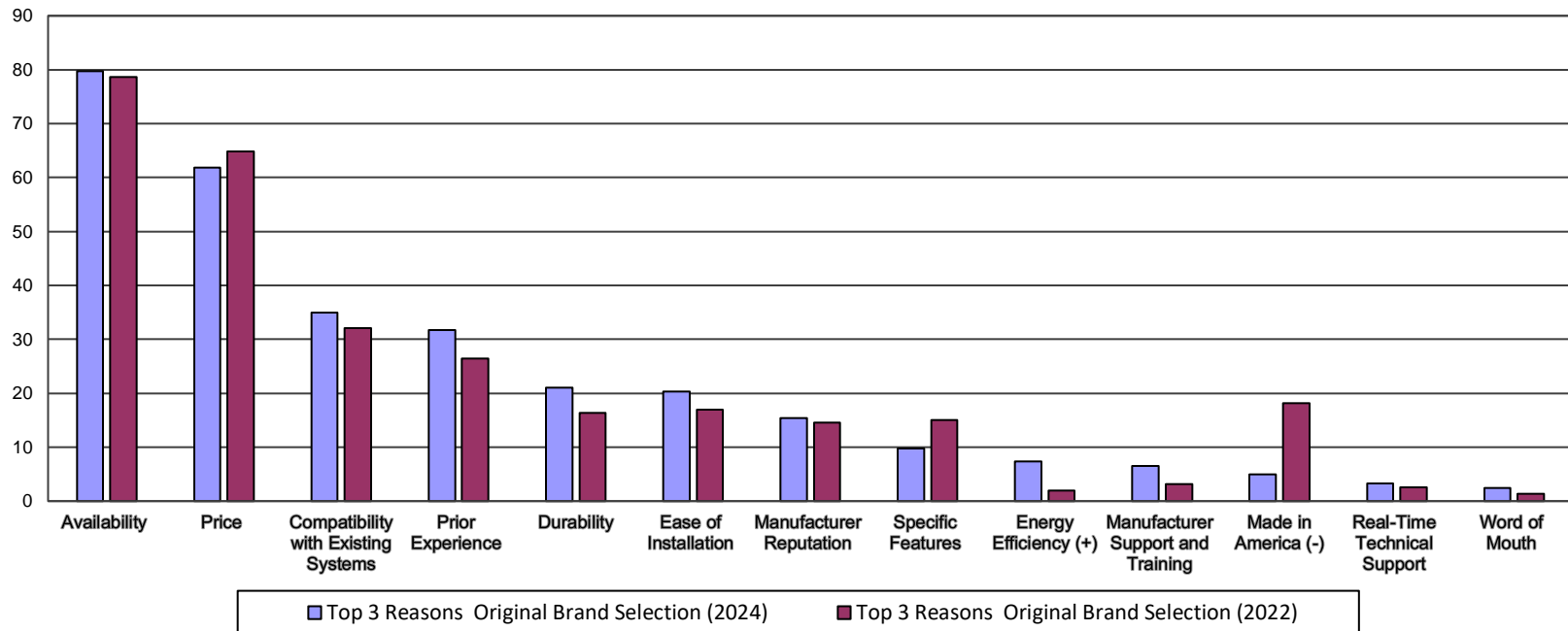
Tables 161,162, 163 and 165

Top 3 Reasons for Original Brand Selection—Trended

The 2024 results generally mirror the 2022 results. Availability continues to be the leading top-3 reason for original brand selection as does Price. Note that as a first and top-3 choice, Availability completely overshadows all of the other attributes. As noted on the previous page, this has been the case since at least 2014.

- On the previous pages, we noted that only two reasons posted significant differences versus two years ago: Energy efficiency more than tripled to a still modest 7%, while Made in America dropped about three-quarters from 18% to 5%.
- There are a few differences by number of employees since 2022.
 - Among firms with 1–9 employees: Compatibility with Existing Systems posted a 15-point increase from 25% to 40%. Specific Features dropped from 18% to 8%, and Made in America dropped from 25% to 5% on a top-3 reason basis. [Not shown]
 - Among firms with 10+ employees: Energy Efficiency increased from 0% two years ago to 5% on a top-3 reason basis.

**Top Three Reasons for Original Brand Selection -- Trended
2024 vs. 2022**



Tables 161, 162, 163 and 165

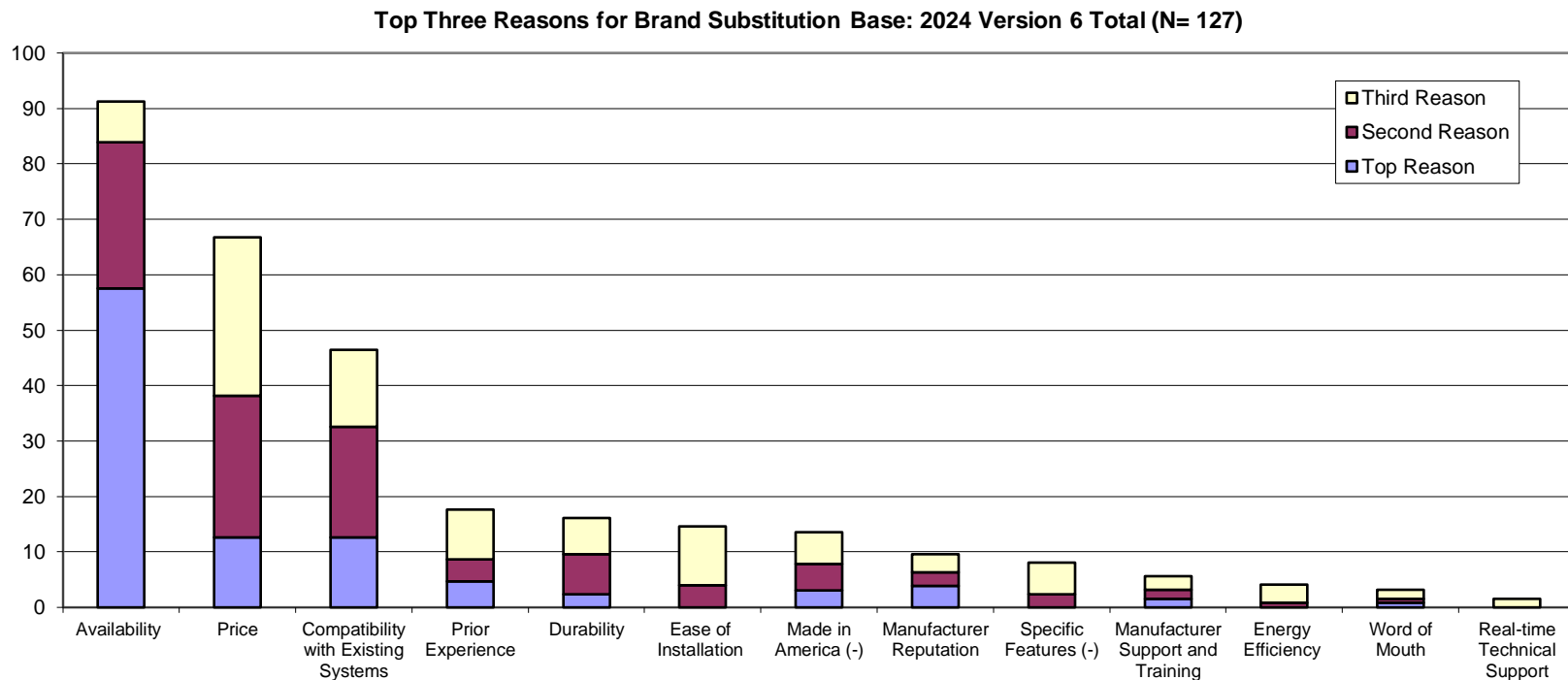
(-) or (+) indicates a significant difference between 2024 (N= 150) and 2022 (N=168).

Brand Substitution: In 2024, the top-3 reasons for brand substitution mirror those for original brand selection. Among the total sample, Availability and Price trump all other attributes as a top-3 reason for brand substitution. Note that as a first and top-3 choice, Availability completely overshadows all other attributes. This was also the case since 2016.

Compatibility with Existing Systems, which was first asked in 2014, had resonance with 46% of electrical contractors. Prior Experience, Durability, Ease of Installation and Made in America form the next tier, chosen by between 13% and 17% of electrical contractors on a top-3 reason basis for making a brand substitution. Fewer than 10% chose: Manufacturer Reputation, Specific Features, Manufacturer Support/Training, Energy Efficiency, Word-of-mouth or Real-time Technical Support.

Among the total sample, compared with two years ago, Made in America dropped substantially and significantly to 13% from 23%; Specific features also dropped from 14% to 8%.

- Made in America and Specific Features also dropped significantly among firms with 1–9 employees. In addition, Compatibility with Existing Systems rose significantly among firms with 1–9 employees, but not among the total sample.
- There were no significantly different changes among firms with 10+ employees compared with two years ago.



Tables 155,156,157 and 159
 (-) or (+) indicates a significant difference between 2024 (N= 127) and 2022 (N=160).

Top 3 Reasons for Brand Substitution—Trended

As we found in the case with original brand selection, the 2024 results for brand substitution generally mirror the 2022 Profile results: Availability and Price, but especially Availability, tower over all other reasons. Compatibility with Existing Systems is solidly in third place.

Among the total sample, compared with two years ago, Made in America dropped substantially and significantly from 23% to 13%; Specific Features also dropped from 14% to 8%.

- Made in America and Specific Features also dropped significantly among firms with 1–9 employees. In addition, Compatibility with Existing Systems rose significantly among firms with 1–9 employees, but not among the total sample. [Not shown]
- There were no significantly different changes among firms with 10+ employees compared with two years ago. [Not shown]

**Top 3 Reasons for Brand Substitution – Trended
Version 6 Total (2024 vs. 2022)**

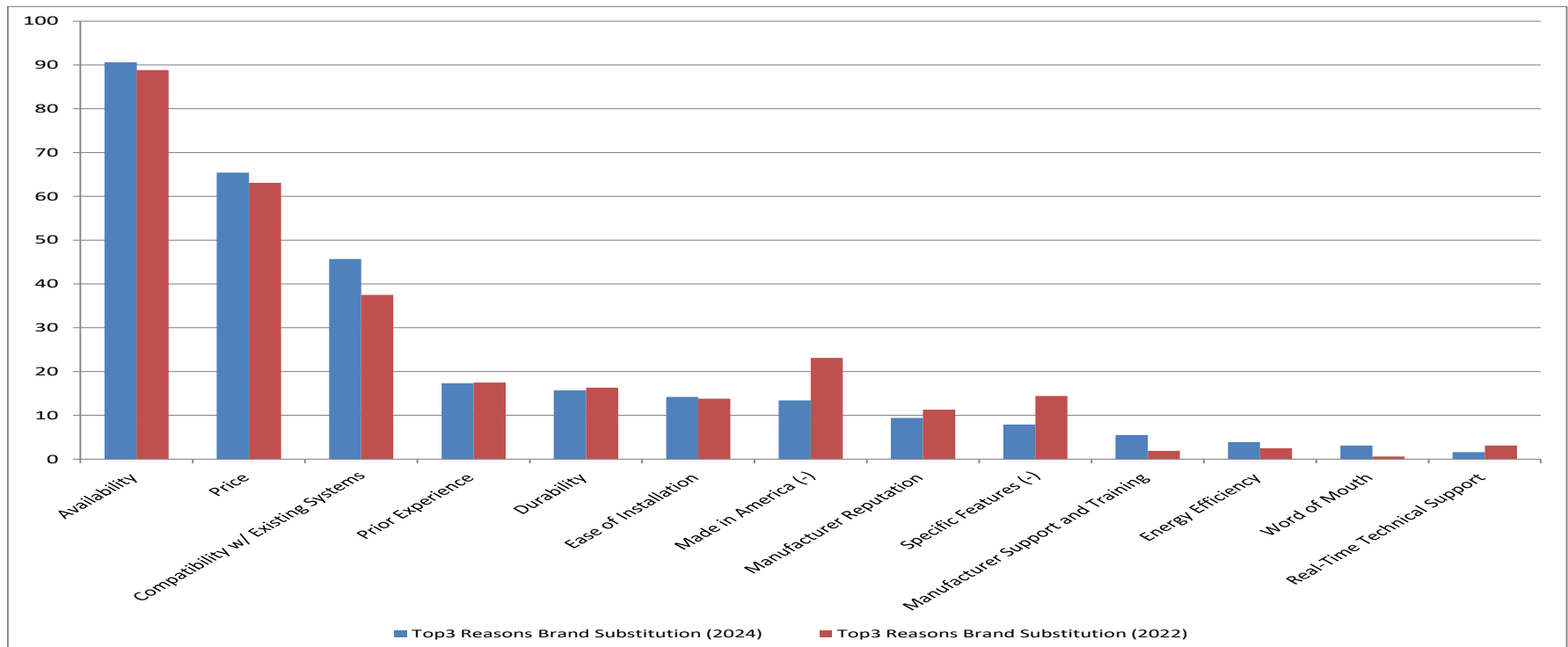


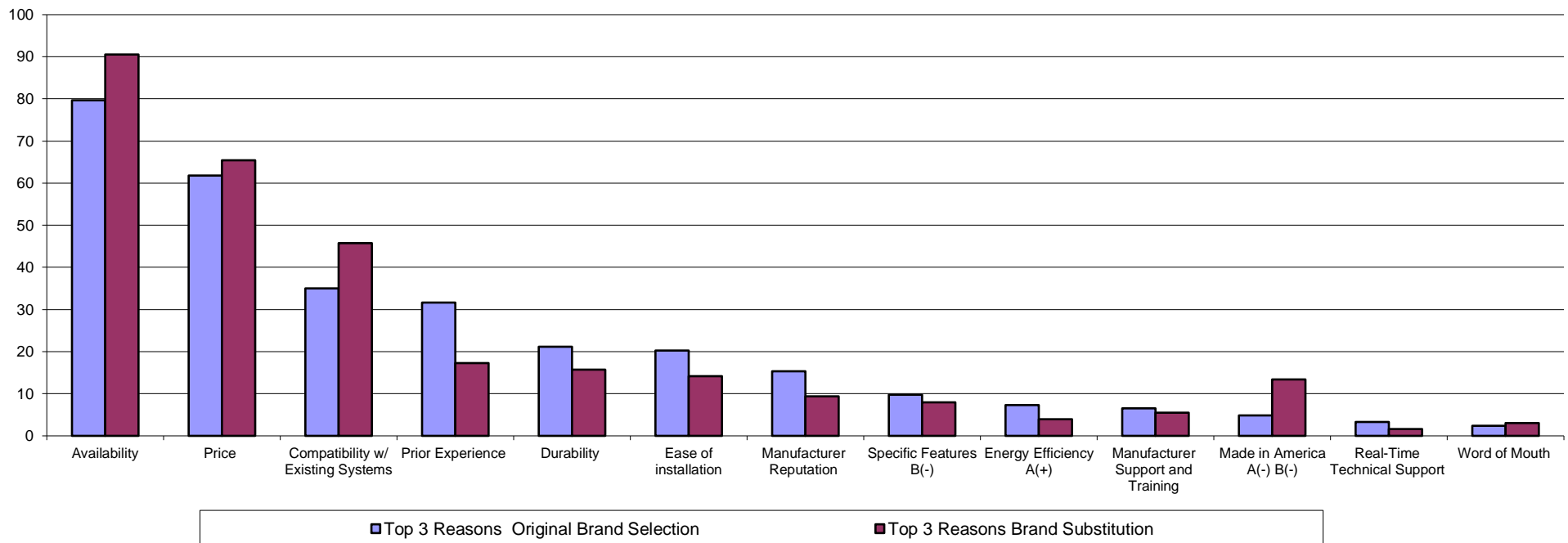
Table 159,

Comparison of Main Reasons for Original Brand Selection vs. Substitution

This chart shows 2024 results for the reasons for original brand selection and for brand substitution in the same place. Regardless of whether the context is original brand selection or brand substitution, Availability and Price receive substantially more mentions than any of the other attributes as a top-3 reason for originally selecting a brand and for brand substitution. Compatibility with Existing Systems, which was first introduced in 2014, emerges in third place for both original brand selection and brand substitution.

- Please note that the statistical testing compares against two years ago *within* original or brand substitution *rather than* as a statistical comparison between reasons for original vs. substitution in the current wave.
- Energy efficiency as a reason for **original** brand selection received more mentions in 2024 than in 2022. Made in America dropped as a top-3 reason among the total sample for both original brand selection and brand substitution. Specific Features dropped as a top-3 reason among the total sample for brand substitution.

Top 3 Reasons for Originally Selecting a Brand Versus Making a Substitution
2024 Profile Study
 (Base: Version 6 Total N = 127, N = 123)



A(-) indicates a significant decline between 2024 (N=123) and 2022 (N= 159) Originally Selecting a Brand totals
 B(-) indicates a significant decline and B(+) indicates a significant increase between 2024 (N=127) 2022 (N= 160) Making a Substitution Total

Of the 13 reasons for original brand selection/brand substitution (on a combined basis), those in small companies are more likely than their larger counterparts to mention Manufacturer Reputation and/or Word of Mouth. Firms with 1–9 employees are less likely than those with 10+ employees to mention Price.

- There is no longer a difference on Price and/or Manufacturer Support/Training in the 2022 Profile Study between 1–9 and 10+ employee companies. Both of these had been more important to larger firms than smaller firms in 2020.
- The higher importance of Made in America to firms with 1–4 employees compared with firms with 5–9 employees also did not emerge in the 2022 Profile Study. The higher importance of American-made to the very smallest firms had been the case in both 2020 and in 2018, but no longer in 2022.

**Top 3 Reasons for Originally Selecting a Brand or Making a Substitution
By Company Size**
All Differences Shown Below Are Statistically Significant
2024 Profile Study

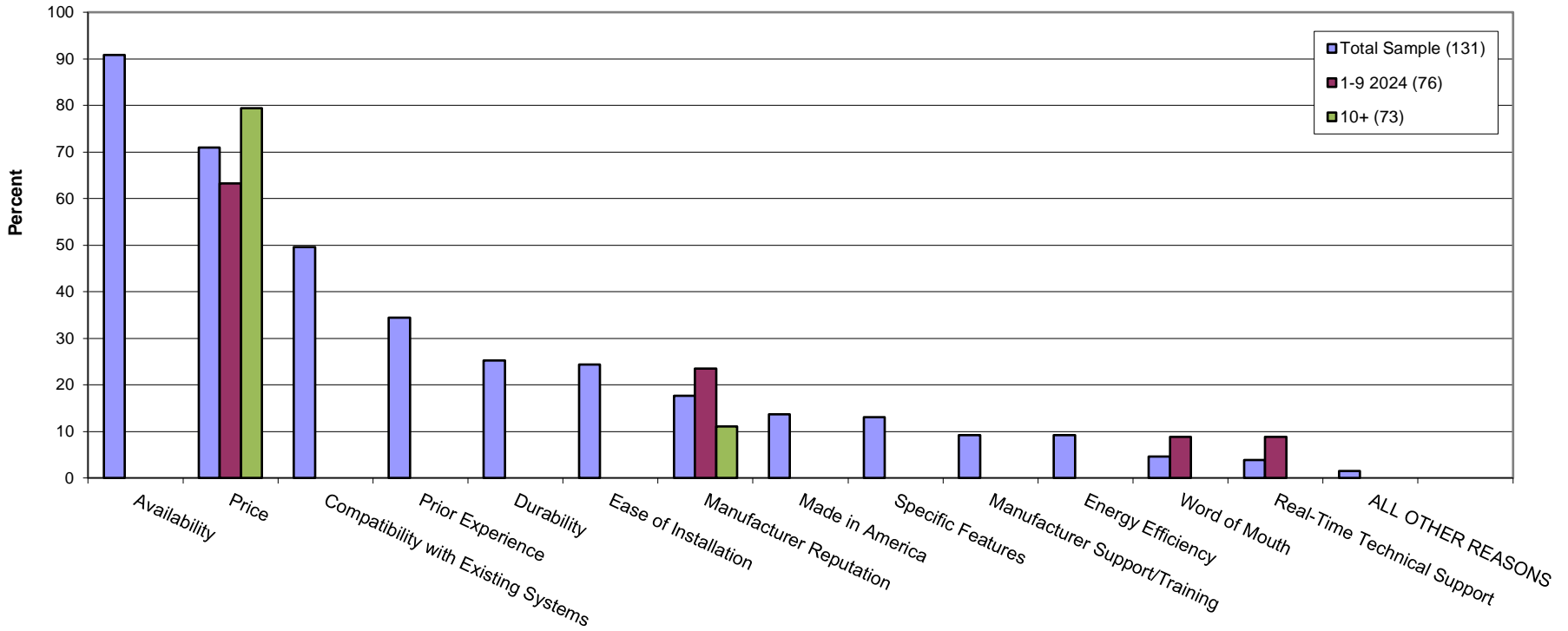


Table 166

▲ TRAINING AND TOPICS OF INTEREST

Will Take/Have Taken Training and What Was Studied

About 85% of electrical contractors say that they, or someone in their firm, has taken training in the past 12 months or plan to take training in the next 12 months to improve or broaden skills for certification. This training could be in the form of online, correspondence or classroom-based training. There is no statistically significant difference between the percentages that took training (85%) vs. those who plan to take training (86%). Further, there is no change in the percentage taking training or planning to take training compared with two years ago.

Because of the pandemic, in 2022, we asked about whether the training was or will be “hybrid” (a combination of online and in-person methods), and regardless of whether they participated in hybrid training or not, we asked if they thought the hybrid approach would continue into the future.

- As was the case two years ago, about one-half (52%) has already or will take hybrid training. 72% think that the hybrid approach will continue into the future. This is essentially unchanged compared to two years earlier.

Table 413

The courses receiving the most mentions include Safety (Electrical/Personal/On-site/Job site) at 64%, Personnel/Leadership at 51%, and *NEC* Usage and/or Changes at 50%.

Interest in most of the individual courses is statistically unchanged compared to two years ago.

- The main differences are that significantly more electrical contractors are interested in topics involving business management rather than technical skills: OSHA Compliance (from 26% to 39%), Estimating (from 22% to 35%), Developing New Business (from 5% to 22%) and Financial Management (from 4% to 14%). Interest in courses on Prefab/Off-site building—a technical topic—also posted a statistically significant increase from 5% to 12%.

There was a strong and statistically significant increase in the percentage of respondents who mentioned having taken or that they will take three or more courses (from 71% to 83%). An impressive 59% mentioned six or more courses, statistically unchanged from two years earlier.

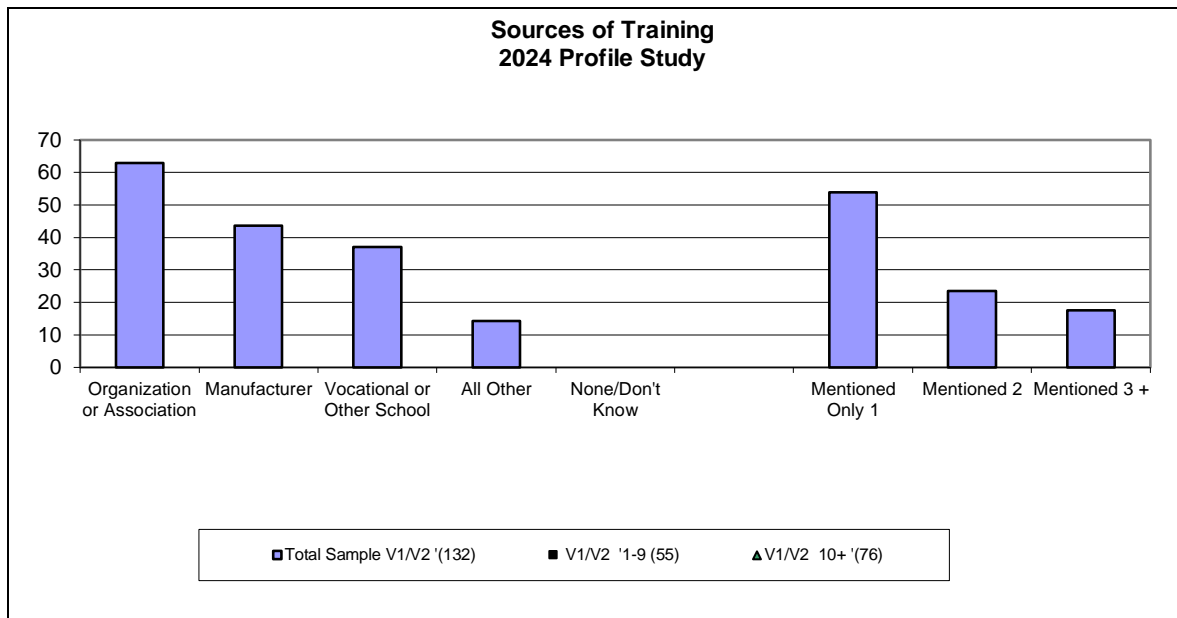
Courses Taken or Will Take						
	<u>2024</u>	<u>2022</u>	<u>2020</u>	<u>2018</u>	<u>2016</u>	<u>2014</u>
	(149)	(102)	(239)	(233)	(350)	(560)
	%	%	%	%	%	%
Have Taken Training in Past 12 Months	85	83	79	74	70	76
Will Take Training in Next 12 Months	86	85	80	77	78	74
Courses Taken or Will Take						
Base	(116)	(90)	(195)	(189)	(282)	(414)
	%	%	%	%	%	%
MENTIONED ANY	100	98	96	97	98	97
<i>NEC</i> Changes	50	54	50	54 <	71	67
LIGHTING (Net)	46	37	40	46 <	58	58
Controls/Systems	35	24	27	33 <	44	50
LED Fixtures	30	23	N/A	N/A	N/A	N/A
Lighting Design	17	16	17	18 <	26	31
Lamp Technology, including LED	16	17	21 <	33	39	33
Drivers/Ballasts	13	13	18	23 <	30	35
Safety (Electrical/Personal/On-site/Job site)	64	53	53 >	37	42	47
Grounding/Bonding	34	44	43 >	32 <	49	50
AUTOMATION/CONTROLS (Net)	35	35	32	32 <	43	< 52
Fire/Life Safety Systems	22	15	18	20	23	< 30
Building Automation Systems	12	8 <	15	15	17	< 25
Home Automation Systems	12	8	12	9 <	23	20
Security Systems	10	12	14	13	13	< 20
Electrical Testing and Maintenance	25	28	28	27 <	34	N/A
GREEN/SUSTAINABLE (Net)	41	32	32 >	23 <	40	39
Electric Vehicle Charging Stations	29	22	18 >	10	14	13
Energy Storage	15	10	13 >	6	9	8
Alternative Energy Systems	13	11	15	11 <	22	24
Energy Use Regulations	7	5	8	6 <	11	12
LEED Certification	6	4	6	6 <	12	12
Green/Sustainable Building/Energy Audits	5	7	7	7	8	10
Community Solar	N/A	N/A	N/A	6	10	N/A

Bolded numbers > and < indicate that the percentage is higher or lower at the 90% level of confidence

Courses Taken or Will Take	Tables 68,69 and 72					
	<u>2024</u>	<u>2022</u>	<u>2020</u>	<u>2018</u>	<u>2016</u>	<u>2014</u>
	(116)	(90)	(195)	(189)	(282)	(414)
	%	%	%	%	%	%
CABLING (Net)	18	23 >	14 <	23 <	33	37
Data and Telecom: Cable, Conduit, etc.	13	16 >	7 <	15	19	23
Data and Telecom: Testing	10	11 >	5 <	13	16	18
Power	8	13	8 <	14 <	24	24
Estimating/Financial Management	37 >	23	26 >	13 <	19	21
Estimating	35 >	22	24	N/A	N/A	N/A
Financial Management	14 >	4	9	N/A	N/A	N/A
Developing New Business Opportunities	22 >	5 <	12	8 <	21	17
Increasing Productivity	19	13	11	9 <	17	20
Electrical System Design or BIM	16	11	10	9 <	22	18
Design-Build	14	9	12	11 <	25 >	19
How to Use New Software	14	15	12	9 <	15	N/A
Systems Integration	13	14	9	9	11	< 21
Power Quality	12	14	15	14	19	21
Prefab/Off-site Building	12 >	5	5	3 <	10	N/A
Sound and Video/VDV (Commercial or Residential)	10	10	6	N/A	N/A	N/A
HVAC	7	9	6	10	N/A	N/A
Internet of Things	3	7	7	7	N/A	N/A
Line Work	3	7	3	4 <	8	8
Drones	3	3	2	2	N/A	N/A
Renovation/MACS/Maintenance	1	1 <	5	3 <	9	< 17
Collaborative Building (Including IPD)	1	3	4	2 <	5	N/A
<u>New In 2020</u>						
Personnel/Leadership	51	44 >	24	N/A	N/A	N/A
OSHA Code Compliance	39 >	26	35	N/A	N/A	N/A
Code Compliance (non-OSHA)	35	27 <	37	N/A	N/A	N/A
Project Management Training	32	24 >	15	N/A	N/A	N/A
Foreman Development	21	17	10	N/A	N/A	N/A
Executive Leadership	16	12	7	N/A	N/A	N/A
Lean, Agile, Six Sigma	0	1	4	N/A	N/A	N/A
<u>New In 2022</u>						
Safety and Wellness	24	23	N/A	N/A	N/A	N/A
<u>New In 2024</u>						
Bidding/Writing Proposals for Govt. Work	10	N/A	N/A	N/A	N/A	N/A
Mentioned 1	6 <	17	19	24 >	9	12
Mentioned 2	11	10	8	< 15	11 >	7
Mentioned 3 or more	83 >	71	69 >	58 <	78	78
Mentioned 6 or more	59	49	42	35 <	50	49

For both training and certification, sources appear to be tiered, with more electrical contractors turning to organizations or associations than to manufacturers or to vocational or trade schools.

There are no statistically significant differences by number of employees in the company's source of training. (Table 71)



There is only one statistically significant difference in the sources of certification by number of employees: smaller firms are more likely to mention two sources of certification. (Table 72)

