Environmental Scan Update — 2025 Outlook for PHCC — National Association

2025 Trends Affecting the Plumbing-Heating-Cooling-Contractors — National Association (Sources: construction industry consulting groups, industry trade press, national media and results of PHCC surveys)

INTRODUCTION

SUMMARY OF 2024

The past year was one of both opportunity and adaptation for plumbing and HVAC contractors. While rising interest rates and inflation led to tighter budgets for some customers, contractors saw demand for energy-efficient systems and water conservation technologies, driven by incentives and regulations promoting sustainability.

Emphasis on workforce development

P-h-c contractors are still struggling to find skilled labor. According to the Bureau of Labor Statistics, employment of plumbers, pipefitters, and steamfitters is projected to grow 6% from 2023 to 2033, faster than the average for all occupations. The bureau anticipates about 43,300 openings for plumbers, pipefitters, and steamfitters are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.

However, earlier this year, *The Wall Street Journal* reported a resurgence of interest in the skilled trades amongst Generation Z. According to *WSJ*, *"The number of students enrolled in vocational-focused community colleges rose 16% last year to its highest level since the National Student Clearinghouse began tracking such data in 2018. The ranks of students studying construction trades rose 23% during that time, while those in programs covering HVAC and vehicle maintenance and repair increased 7%."*

Additionally, the Education Data Initiative reports that the average cost of college has more than doubled in the 21st century. Apprenticeship programs where students can "earn while they learn" are becoming a popular alternative to accruing large amounts of debt from college tuition.

Many p-h-c contractors invested in upskilling current staff and initiatives like reverse mentoring to bridge generational knowledge gaps. Additionally, many are finding success through in-house training programs featuring PHCC Academy® curriculum.

Focus on resiliency

Extreme weather events like Hurricanes Helene and Milton caused widespread damage to water infrastructure, including burst pipes, flooded plumbing systems, and overwhelmed drainage networks. And in early 2025, California wildfires tested infrastructure systems. Contractors were often called upon for emergency response work, requiring rapid mobilization of resources and staff. However, these events also strained supply chains, making it difficult to source essential materials and equipment for repairs.

At the same time, contractors had to address the longer-term effects of climate change by incorporating resilient plumbing designs, such as flood-resistant fixtures and systems capable of withstanding more frequent extreme weather. While these events heightened the workload, they also emphasized the importance of disaster preparedness and adaptive solutions, driving the adoption of new technologies and methods that could mitigate future weather-related disruptions. Many plumbing firms used these opportunities to educate customers and expand services, ultimately building stronger relationships and business resilience.

Navigating economic pressures

In 2024, p-h-c contractors faced mounting economic pressures driven by inflation, rising material costs and market volatility. Essential supplies such as piping, fixtures, and specialized components saw significant price increases, squeezing profit margins and forcing contractors to pass costs onto customers or absorb the financial hit.

Additionally, soaring fuel prices raised the expense of operating service vehicles, further straining budgets. Uncertain economic conditions also led to fluctuations in consumer spending, particularly for non-essential projects like home remodels, making it difficult for contractors to forecast demand accurately.

These challenges forced many contractors to adopt innovative strategies to manage costs, improve efficiency and maintain market competitiveness. Many turned to bulk purchasing and forming partnerships with suppliers to negotiate better pricing and mitigate the impact of rising material costs. To combat soaring fuel expenses, contractors optimized route planning using GPS technology and invested in fuel-efficient or electric service vehicles. Embracing technology played a pivotal role, with contractors leveraging field service management software to streamline scheduling, track expenses and boost productivity. Contractors also diversified their offerings by promoting value-added services, such as smart plumbing solutions and water conservation technologies, which appealed to eco-conscious customers willing to invest in long-term savings.

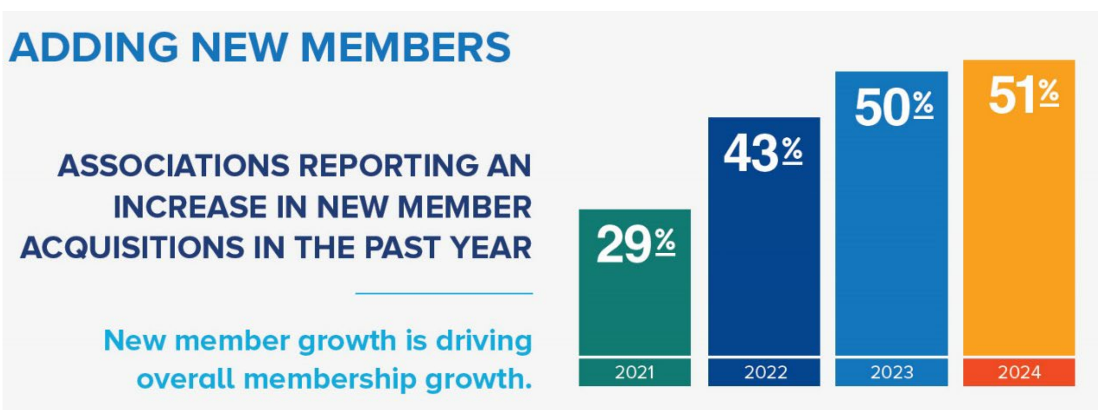
Additionally, contractors communicated transparently with clients about cost increases, building trust and securing project approvals despite higher pricing. These proactive measures enabled many plumbing businesses to navigate economic challenges while staying competitive in a volatile market.

Contractors will continue proving their adaptability and resilience as these challenges and new ones arise in 2025.

INTERNAL VARIABLES

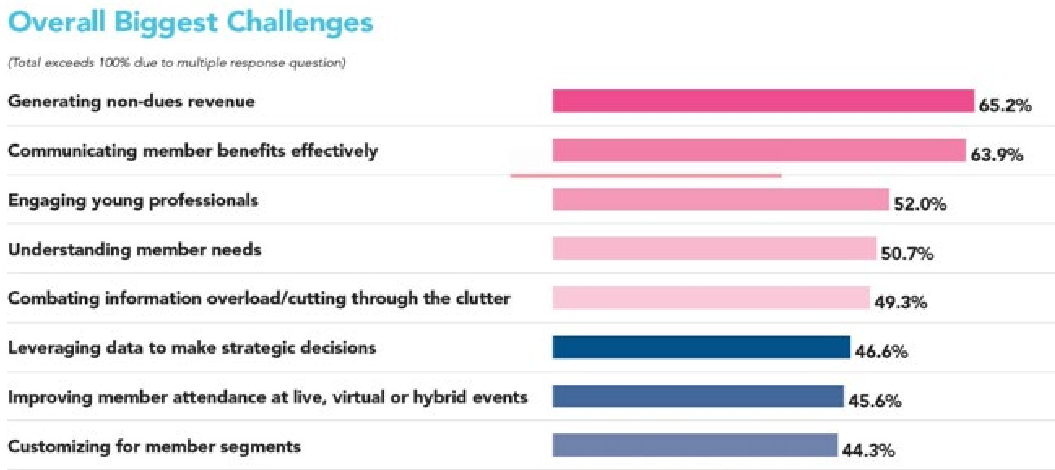
P-h-c contractors are not the only ones adapting in a difficult market. Associations are continuing to rebound from the challenges of the past few years and are steadily expanding their membership, according to Marketing General Incorporated's 15th Edition Membership Marketing Benchmarking Report.

Per the report, nearly half (47%) of associations reported an increase in membership counts. But perhaps more telling is that only 21% reported membership declines — the lowest percentage in the 16-year history of the report. Additionally, 31% of associates indicated no change in their membership counts — the highest percentage reported since 2009. These two stats point to renewed stability following the aftermath of the global pandemic.



Source: Marketing General Incorporated

Although technological advancements offer a multitude of communication platforms and new AI software capabilities are streamlining messages, the 2024 Association Advisory Benchmarking Report reports that associations are having more challenges reaching members with valuable information. The top three challenges were generating non-dues revenue, communicating member benefits effectively, and engaging young professionals.



Source: Association Advisor

Another interesting statistic to note in the 2024 Association Advisory Benchmarking Report is how effective associations are in using various points of contact to engage members. While there is some movement in the report's ranking this year, the two most valuable tools continue to be traditional conferences/trade shows/face-to-face events (91%) and email blasts (87%).

Top 10 Overall Member Engagement Tools

(% respondents who find each very/extremely valuable)

(Total exceeds 100% due to multiple response question)

	Rank	2024	2023	Rank Change
Traditional conferences/trade shows/ face-to-face events	1	91.4%	91.5%	No Change
Email blasts	2	86.8%	86.2%	No Change
Enewsletters	3	85.0%	79.6%	▲ 1
Association websites	4	84.4%	85.3%	▼ 1
LinkedIn	5	73.7%	68.6%	▲ 2
Webinars	6	73.1%	71.4%	▼ 1
Networking events	7	71.6%	65.5%	▲ 2
Committee meetings	8	66.1%	66.6%	No Change
Training and development events	9	65.4%	70.3%	▼ 3
Annual or regional meetings	10	56.6%	55.7%	No Change

Source: Association Advisor

As PHCC enters 2025, PHCC's contractor membership numbers are 3,000 total contractors at year end with 279 new members and 95 reinstated members. The association continues to achieve high member retention rate of 86% percent, which is higher than the industry average. The chapters continued to be active in recruitment and retention through their activities and initiatives and national supported those as requested.

2025 MACROECONOMIC OUTLOOK

According to Deloitte's 2025 Engineering and Construction Industry Outlook, there are reasons to be optimistic looking ahead into 2025. According to the report, short-term interest rates are likely to decrease gradually over the next few years — the improving economic conditions are likely to influence construction demand across various segments. Additionally, declining mortgage rates could boost demand in residential construction activity. Furthermore, the Infrastructure Investment and Jobs Act (IIJA), the Inflation Reduction Act (IRA), and the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act may continue to drive growth in segments such as manufacturing and energy.

Deloitte also notes that with the increasing uptake of AI and advanced computing across industries, the next year will also see an increase in data center construction.

"Overall, the U.S. construction industry is likely to record moderate growth in the medium term with slowing inflation and a supportive monetary policy. The E&C (Engineering & Construction) sector is not new to disruption and volatility, and evolving economic and regulatory factors are expected to play a pivotal role in shaping the upcoming year. Nonetheless, 2025 could present opportunities for continued growth."

As E&C firms plan for the upcoming year, Deloitte identifies four key areas below that may help them capitalize on the projected industry growth and tackle unforeseen challenges, including:

- **Managing the labor mismatch**: E&C firms will likely use a variety of strategies to build an agile workforce;
- **Increasing technological integration**: Evolving technologies can continue to transform E&C operations across the value chain;
- **Financial considerations**: E&C firms strive to drive growth from strategic divestitures, capital allocation strategies, and the growing role of private equity; and
- **Industrial policies**: E&C firms are likely to remain agile in the face of an evolving policy landscape.

Brian Beaulieu, chief economist and CEO at ITR Economics, said the start of 2025 will be the typical seasonal slow months, but the year will get better the further we get into it, according to a December 2024 article in *Plumbing & Mechanical* magazine.

"We see that consumers' fiscal position getting better as we go through the end of this year and even better as we go deeper into 2025. We really think the second half of the year is going to be better than the first half of the year. How's it going to impact our industry? It's going to help our industry. We're already getting some upside signals from the ITR Remodeling Leading Indicator. Permits are showing some strength. Existing home sales are still weak, but there are some early signs of that turning around. So all those are good precursors for business getting better the further we get into 2025."

NEW CONSTRUCTION OUTLOOK

Despite the assumed recession for the broader U.S. economy in 2024 and into 2025, FMI anticipates engineering and construction spending will continue to expand, albeit at a slower rate over our forecast period, according to its Fourth Quarter North American Engineering and Construction Outlook.

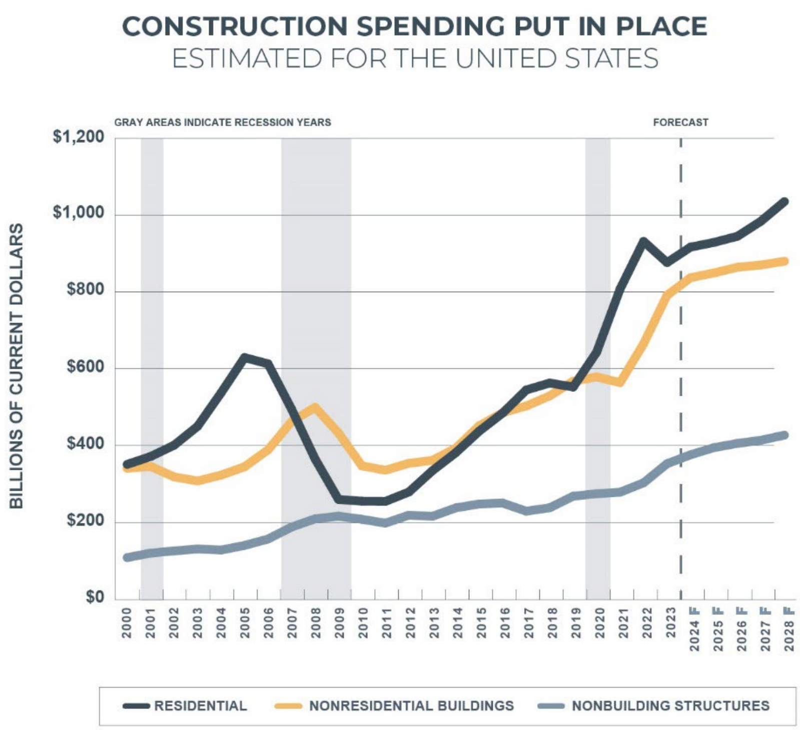
"After expanding by more than 40% cumulatively since 2020, growth is projected to slow for the industry overall during FMI's forecast period, with several segments and geographies performing above average. The expected return of single-family residential construction will stimulate demand for other construction segments (e.g., mixed use and institutional structures) and support ongoing industry expansion. Despite broader U.S. economic challenges, this slower pace of investment should allow many stakeholders to address some of the longer-term challenges facing the built environment."

Jay Bowman, partner at FMI, explains that firms will need to position themselves strategically over the next year in order to capitalize on growing markets.

"It's true that we are entering a period of more tempered growth. Still, construction spending forecast for the next couple of years is around about 2%, so that growth is slower than what we've seen in prior years, but it's continuing to expand… on the single-family side, we saw a drawback of 13% last year, but we're actually seeing an increase this year, as rates start to stabilize, as demand starts to pick back up again.

Bowman stated that the nonresidential building side is stabilizing, but with selective growth. Health care construction is "a little flat," but expected to pick up after that, he says, particularly if some projects come about with more investment in private hospitals. Other takeaways from the report:

- More interest in dormitories and instructional-type building is helping the education sector.
- A tempered growth is expected in manufacturing after a 20% increase in 2024, driven by investments in the semiconductor space, EV manufacturing, clean energy and bio manufacturing.
- The nonbuilding structures sector will continue to be a primary driver of growth and construction over the next year to five years, especially as money flows in from the Infrastructure Investment and Jobs Act and the Inflation Reduction Act.



Source: FMI Forecast Q4 2024

Single-family

For the residential segment, the industry faces an estimated 1.5 million shortage in homes, a figure that is expected to rise due to the cost of homes, debt and associated services, (insurance), according to Deloitte.

"Homebuilder sentiment remains below the index neutral base of 50, suggesting further industry contraction. The strongest component of the index in the next six months is expectations for sales."

According to the 2025 Dodge Construction Outlook, though mortgage rates have fallen, home prices have risen by more than enough to offset any improvement in overall affordability. The last time the housing market was this unaffordable was just before the Great Recession in early 2006.

"Market fundamentals are very different now. In 2006, the housing market was oversupplied, and housing prices were rising due to rampant speculation. At present, the housing market is undersupplied by nearly 1.5 million units, while a strong labor market is bringing buyers back into the market. On the upside, new home sales, which are a key demand driver for new construction, were up 3% on a year-to-date basis through September. Starts will decelerate in 2025, growing just 5% in units. The single-family market is far more exposed to a lack of labor, restrictive zoning laws and high land costs. These issues will mean the continuation of a new construction market that tilts to high-end homes, further perpetuating affordability issues and curtailing new home purchases by younger buyers.

FMI forecasts that the residential new construction market will finish 2024 at $422 billion, up 5% from 2023. The report forecasts the market will increase 5% to $441 billion in 2025, before starting to stabilize in 2026, and growing another 5% in 2027 and 6% in 2028.

"Due to declining interest rates, homebuilders plan to more regularly compete with existing homeowners' listings through the end of this year and into 2025. Builders will remain competitive against traditional lending on existing homes over the near term. Thirty-year mortgage rates are expected to be between 5.5% and 6.5% over the next six months, and lower than 5% by the end of 2025."

Multifamily

FMI's outlook for the multifamily market shows a decrease over the next two years. The report calls for the market wrapping up 2024 at a 4% loss compared to 2023 at $140 billion. The 2025 outlook is expected to be down 16% to $118 billion, followed by a further 6% loss to $110 billion in 2026. FMI predicts a rebound in 2027 and 2028 with market gains of 6% and 9%, respectively.

"Significant inventory was added in recent months and multifamily units in development have contracted through 2024. The market is also seeing stable or falling rental rates in many large metropolitan markets, causing many owners to either pause or reconsider new developments. Fewer multifamily projects breaking ground will disrupt other segments in the years ahead, notably retail, lodging, office and amusement and recreation, due to fewer mixed-use developments. Developers are more likely to move forward with project plans going into next year, with ongoing rate cuts anticipated through 2025. Those projects will take some time to reach groundbreaking, and investments will be limited given that rental rates are no longer expanding rapidly."

Housing trends

While FMI predicts the home improvements market to end the year up 8% over last at $357 billion, the next four years will stabilize with a few modest gains. The report forecasts a 4% increase in 2025 to $372 billion; a 2% increase in 2026 to $378 billion; another 3% rise in 2027 to $390 billion; followed by a 4% increase in 2028 to $404 billion.

"Homeowners may delay improvements other than general repair and maintenance due to high materials, labor and financing costs combined with moderating home prices. The median age of an owner-occupied home is more than 40 years (and increasing). Big-box home-improvement retailers have been warning of consumer concerns and are expecting reductions in renovations and do-it-yourself projects. There will likely be more special financing and promotions offered as incentives to motivate buyers. Homeowners will likely be more mobile due to lower rates, which should increase demand for improvements due to higher buying and selling activity. New-home builders have been limiting custom and luxury options in recent years, which will encourage some to invest in upgrades on their new properties."

Simon Koenig, director of plumbing and infrastructure at REHAU, told Plumbing & Mechanical magazine that he expects repair and remodeling in the plumbing industry to increase in 2025.

"The ongoing housing shortage, paired with the fact that the average home in the U.S. is now more than 40 years old, will prompt homeowners to address problems in their current homes," he says.

"Many will choose to invest in improvements that not only maintain but also add value to their homes with upgrades, ensuring they remain functional and in prime condition for many more years to come."

Likewise, Dan Callies, president of Oak Creek, Wisconsin-based Oak Creek Plumbing and president of PHCC — National Association, also thinks renovations will be booming in 2025, but now with a "save the planet" twist.

"Homeowners want energy-efficient, eco-friendly systems that look good, too," he says. "Commercial clients will push for more green compliance. Emergency calls — well, thanks to smart leak detectors, fewer people will wait until their house is half underwater before calling us!"

Additionally, shower rooms, wet rooms and outdoor cooking spaces are among the Top 10 home design trends in 2025, according to Houzz. The shower room is gaining popularity amongst homeowners who prefer more privacy than a frameless glass enclosure. These high-end rooms often include features such as steam or sauna as well as aromatherapy, Houzz notes. Wet rooms are increasing in popularity, and consist of a set up that combines a separate shower and tub in one combined space. While wet rooms have historically been used in large layouts, the 2025 Houzz home design trends report reveals they're becoming more popular in smaller, narrow spaces as well, as it helps make the smaller space look and feel more luxurious. Houzz dubbed 2024 the "year of the backyard," but notes that homeowners will still focus on creating an outdoor entertaining space in 2025 as well.

P-h-c contractors involved in remodeling services should familiarize themselves with luxury shower products and design in order to meet customers' needs in these areas.

Non-residential Construction

Per FMI's U.S. Engineering and Construction Outlook 2024 Q4 Report, public safety, amusement and recreation, transportation and manufacturing are all expected to finish the year up from 2023, with public safety and manufacturing representing the largest increases of 29% and 21%, respectively, over the previous year.

FMI anticipates further manufacturing growth in 2025, up another 5% to $247 billion before stabilizing in 2026. The forecast predicts a downturn in this segment in 2027 and 2028.

Additionally, public safety should see further growth of about 6% in 2025 before experiencing losses the next two years.

Office, health care, educational, religious and communication segments all saw stable growth in 2024, per FMI's report. Office is expected to remain stable, experiencing modest growth between 1% to 3% over the next four years.

"Late 2025 and 2026 will likely see some reversal in extremely high office vacancy rates, which exceed 20% for the nation and are at the highest levels since the late 1970s. Several major metropolitan areas have availability rates exceeding 25%, including San Francisco, Atlanta, Dallas, Chicago and Houston. A few large employers (e.g., Amazon, Apple, Blackrock) recently announced plans for a return-to-the-office work week."

FMI anticipates the demand for health care construction spending will remain stable into 2025 before experiencing slight growth of 6% in 2026. This growth will be led by private hospital construction, with many new large facilities and expansion projects underway. FMI predicts merger and acquisitions activity in this space over the next several years as the mix of traditional and digital health care becomes more common and desirable.

Education is also expected to remain stable with market gains of 3% each year over the next four years.

".... Higher-education construction spending remains strong, outpacing K-12 through year-end, led by dormitory and instructional facility investments. IRA funds will be used to begin projects into 2025, largely focused on HVAC, lighting, building envelope, clean and renewable energy solutions, and car-charging stations."

Lastly, FMI anticipates another slowdown in commercial, with the market finishing the year down 8% at $130 billion, followed by another 8% decrease in 2025. FMI predicts the segment stabilizing in 2026, followed by a growth of 5% in 2027 and 9% in 2028.

"The commercial sector is expected to contract in 2024 for the first time since 2019, largely driven by a 20% decline in year-over-year private warehouse construction. The recent wave of multifamily development is being followed by increased brick-and-mortar retail investment through 2025 to service new residents and will somewhat offset further contraction in warehouse. New starts will likely see ongoing challenges tied to increased financial stress on the consumer and reduced multifamily and mixed-use development investment over the next several years."

Nonbuilding Structures Construction

Conditions are expected to remain generally favorable for nonbuilding construction in 2025 driven by the more than $1 trillion dollars that have become available under the Biden administration's Infrastructure Investment and Jobs Act (IIJA), according to the 2025 Dodge Construction Outlook.FMI points to infrastructure construction as the brightest spot in its forecast. FMI expects 2025 Policies will continue to support infrastructure investment, although likely in a much more limited fashion than current levels reflect. Of particular note for p-h-c contractors are the forecasts for sewage and waste disposal and water supply markets.

Sewage and waste disposal is expected to finish 2024 up by 9% over the previous year at $46 billion. Additionally, water supply is anticipated to end the year up 14% at $32 billion. Both of these sectors are forecasted to see growth in 2025, followed by modest increases of 1% to 5% over the next three years.

Additionally, the EPA estimates that the U.S. needs $650 billion over the next 20 years to improve safe drinking water infrastructure.

Construction Put in Place Estimated for the United States
Millions of Current Dollars
4th Quarter 2024 Forecast, Based on 2nd Quarter 2024 Actuals and 3rd Quarter 2024 Assumptions

	2019	2020	2021	2022	2023	2024F	2025F	2026F	2027F	2028F
RESIDENTIAL BUILDINGS										
Single-family	280,385	310,060	424,491	453,752	400,909	421,623	440,646	457,448	478,299	504,738
Multifamily	88,401	100,089	114,926	123,801	145,587	139,776	117,526	110,267	116,946	127,888
Improvements*	184,656	234,108	269,551	355,215	331,100	356,523	371,950	378,420	390,091	403,929
Total Residential	**553,442**	**644,257**	**808,968**	**932,768**	**877,596**	**917,921**	**930,122**	**946,134**	**985,336**	**1,036,555**
NONRESIDENTIAL BUILDINGS										
Lodging	33,461	28,483	19,082	20,236	24,740	23,267	21,484	21,625	22,866	25,396
Office	88,724	92,831	89,902	95,382	98,989	99,683	100,279	103,591	107,164	108,390
Commercial	84,345	89,714	97,394	131,503	141,702	129,697	119,340	119,625	125,670	136,540
Health Care	46,263	48,599	50,327	58,098	65,429	66,308	68,008	71,996	74,960	76,235
Educational	108,952	110,692	100,988	104,035	120,226	125,586	128,937	132,483	135,802	140,367
Religious	3,730	3,472	3,096	3,187	3,801	3,887	3,707	3,406	3,470	3,606
Public Safety	12,012	17,667	12,826	11,715	14,395	18,596	19,796	18,428	16,999	17,088
Amusement and Recreation	30,416	28,288	27,102	31,527	36,203	39,746	41,506	40,746	39,284	40,079
Transportation	57,448	60,734	59,075	60,908	65,246	68,678	71,551	75,266	77,991	81,468
Communication	22,184	23,876	23,091	24,366	28,004	28,164	29,197	30,638	32,282	33,897
Manufacturing	80,978	75,425	82,030	125,025	193,630	234,518	246,839	247,560	234,712	217,955
Total Nonresidential Buildings	**568,513**	**579,781**	**564,913**	**665,982**	**792,365**	**838,131**	**850,645**	**865,365**	**871,201**	**881,020**
NONBUILDING STRUCTURES										
Power	117,960	118,168	119,108	121,605	134,010	143,532	152,757	155,662	158,698	162,685
Highway and Street	99,402	102,321	103,381	115,655	138,060	143,754	148,137	152,376	155,955	162,922
Sewage and Waste Disposal	26,119	27,189	28,811	33,246	41,912	45,869	48,316	50,186	50,565	51,457
Water Supply	16,397	18,952	20,284	24,056	27,999	31,979	34,485	36,265	36,960	37,669
Conservation and Development	9,207	8,903	7,911	9,392	11,719	11,803	11,931	12,107	12,651	13,391
Total Nonbuilding Structures	**269,085**	**275,533**	**279,495**	**303,954**	**353,700**	**376,936**	**395,626**	**406,596**	**414,829**	**428,123**
Total Put in Place	**$1,391,040**	**$1,499,571**	**$1,653,376**	**$1,902,704**	**$2,023,661**	**$2,132,988**	**$2,176,393**	**$2,218,095**	**$2,271,365**	**$2,345,698**

Source: FMI Forecast Q4 2024

Construction Put in Place Estimated for the United States
Change From Prior Year — Current Dollar Basis
4th Quarter 2024 Forecast, Based on 2nd Quarter 2024 Actuals and 3rd Quarter 2024 Assumptions

	2019	2020	2021	2022	2023	2024F	2025F	2026F	2027F	2028F
RESIDENTIAL BUILDINGS										
Single-family	-3%	11%	37%	7%	-12%	5%	5%	4%	5%	6%
Multifamily	6%	13%	15%	8%	18%	-4%	-16%	-6%	6%	9%
Improvements*	-3%	27%	15%	32%	-7%	8%	4%	2%	3%	4%
Total Residential	**-2%**	**16%**	**26%**	**15%**	**-6%**	**5%**	**1%**	**2%**	**4%**	**5%**
NONRESIDENTIAL BUILDINGS										
Lodging	6%	-15%	-33%	6%	22%	-6%	-8%	1%	6%	11%
Office	16%	5%	-3%	6%	4%	1%	1%	3%	3%	1%
Commercial	-2%	6%	9%	35%	8%	-8%	-8%	0%	5%	9%
Health Care	6%	5%	4%	15%	13%	1%	3%	6%	4%	2%
Educational	8%	2%	-9%	3%	16%	4%	3%	3%	3%	3%
Religious	7%	-7%	-11%	3%	19%	2%	-5%	-8%	2%	4%
Public Safety	28%	47%	-27%	-9%	23%	29%	6%	-7%	-8%	1%
Amusement and Recreation	8%	-7%	-4%	16%	15%	10%	4%	-2%	-4%	2%
Transportation	8%	6%	-3%	3%	7%	5%	4%	5%	4%	4%
Communication	-9%	8%	-3%	6%	15%	1%	4%	5%	5%	5%
Manufacturing	12%	-7%	9%	52%	55%	21%	5%	0%	-5%	-7%
Total Nonresidential Buildings	**7%**	**2%**	**-3%**	**18%**	**19%**	**6%**	**1%**	**2%**	**1%**	**1%**
NONBUILDING STRUCTURES										
Power	18%	0%	1%	2%	10%	7%	6%	2%	2%	3%
Highway and Street	8%	3%	1%	12%	19%	4%	3%	3%	2%	4%
Sewage and Waste Disposal	9%	4%	6%	15%	26%	9%	5%	4%	1%	2%
Water Supply	6%	16%	7%	19%	16%	14%	8%	5%	2%	2%
Conservation and Development	12%	-3%	-11%	19%	25%	1%	1%	1%	4%	6%
Total Nonbuilding Structures	**13%**	**2%**	**1%**	**9%**	**16%**	**7%**	**5%**	**3%**	**2%**	**3%**
Total Put in Place	**4%**	**8%**	**10%**	**15%**	**6%**	**5%**	**2%**	**2%**	**2%**	**3%**

*Includes additions, alterations and major replacements. Does not include maintenance and repairs.

Source: FMI Forecast Q4 2024

POLITICAL

The outcome of elections can significantly impact plumbing and HVAC contractors by shaping policies related to energy efficiency, infrastructure spending, and labor regulations. PHCC has identified many new opportunities and a few challenges going into a new administration and the 119th Congress in 2025.

"PHCC has made clear prior to Nov. 5 that a Republican administration and Congress would bode well for our positions on energy policy, particularly as it relates to the use of natural gas and gas appliances in the built environment," Mark Valentini, PHCC's vice president of legislative affairs, said in his November newsletter to PHCC members. "We expect Congress to introduce energy legislation, and PHCC will work with the House and Senate to ensure our priorities are enshrined in any legislation that promotes a robust and diverse national energy portfolio and allows consumer choice when it comes to powering their homes and essential appliances for health and welfare."

Valentini also identified tax and workforce policies as areas of priority for PHCC in 2025. The Tax Cuts and Jobs Act of 2017 provided contractors with key benefits, including a lower corporate tax rate, higher estate tax thresholds for easier business asset transfers, and a pass-through deduction for qualified business income under Section 199A. With the latter two set to expire in 2025, PHCC plans to advocate for their extension or permanence to support contractor investments in businesses and workforce development.

PHCC also emphasizes the importance of skill development through registered apprenticeship programs, which have prepared workers for over 80 years. The organization cautions that a credential-based approach, favored by some lawmakers, could leave jobseekers without the essential skills plumbing and HVAC contractors need. PHCC will collaborate with Congress and the Department of Labor to preserve the integrity of these programs, ensuring they continue to produce skilled, high-quality workers with lifelong career opportunities and a pathway to the middle class.

PHCC is focused on potential policy decisions from the incoming Trump administration and Congress on immigration and trade. PHCC needs to hear from contractors regarding any concerns they may have regarding adverse immigration actions proposed, particularly as it relates to deportations and systemic reforms impacting visas and work permits and how it may impact the pool of skilled workers regardless of immigration status. Proposed tariffs on imports may affect costs of and access to equipment and appliances, and PHCC is seeking input from contractors and manufacturers on potential market impact.

Based on the actions taken during the previous Trump Administration, it is expected that there will be a slowing of the rulemaking process. PHCC expects the new administration to pause the ongoing actions of the agencies and adjust the work of the departments to match administrative priorities.

Programs related to the Inflation Reduction Act (IRA) will be prime targets for budget cuts as they represent some $370 billion. Since the new administration has indicated more willingness to support a diverse energy policy and less commitment to electrification, IRA funds supporting electrification may be eliminated.

Let's take a look at some of the issues impacting p-h-c contractors over the next year.

2025 INDUSTRY TRENDS FOR P-H-C CONTRACTORS

Labor shortage

Despite some of the positive gains the p-h-c industry made with reports of increased enrollments in apprenticeship programs and vocational-technical schools in 2024, talent shortages are likely to remain a key concern in 2025. Deloitte notes the industry is also witnessing a shift in skill requirements, which is likely to further complicate workforce development efforts.

"For instance, 44% of the current skill requirements in infrastructure are expected to evolve over the next five years. This is expected to further complicate the talent search as companies strive to fill gaps in both traditional labor skills and those required for a digital, more automated future. Demand is rising for digital skills such as data and analytics, cloud computing and software development, alongside soft skills like people, business and supplier management.

"An aging workforce presents another issue, with projections indicating that, by 2030, the average age of craft workers will be 46 years. Firms also face a perceived lack of interest among younger generations who possess different expectations when it comes to work and the working environment. This creates a unique challenge necessitating a balance between institutional knowledge that experienced employees bring and the new skills and perspectives of younger employees."

On a positive note, Dan Quinonez, COO of PHCC, told *Plumbing & Mechanical* magazine that PHCC chapters across the country have experienced notable increases in enrollment of their HVAC and plumbing programs.

"It's an incredibly exciting time for Gen Z to consider the trades as a pathway to a meaningful career," he says. "Recognizing the growing interest in skilled trades among young people, the PHCC Educational Foundation, through the PHCC Academy, has been proactive in expanding its educational offerings. By modernizing curriculums, enhancing training facilities and forming partnerships with industry leaders, PHCC aims to equip the next generation of HVAC technicians and plumbers with the skills and knowledge needed to thrive in their careers."

Quinonez points to several contributing factors for this upswing in enrollment, including job security and demand, financial incentives, hands-on learning and industry innovation.

To provide a one-stop learning resource for the industry, PHCC and the PHCC Educational Foundation have consolidated their education and training resources under the PHCC Academy®. The Academy offers various stages of training and education, including apprenticeships, technician roles, and different phases of business ownership, with content tailored to each career stage. Several new programs were announced in 2024, with more post-apprenticeship courses planned in 2025.

Sustainability and regulatory changes

Sustainability and regulatory changes are driving significant shifts in the p-h-c industry in 2025, shaping product offerings, business strategies and workforce training. Stricter energy efficiency standards and water conservation mandates are pushing contractors to adopt greener technologies, such as high-efficiency heat pumps, low-flow fixtures and low-GWP refrigerants. These changes are creating demand for retrofitting older systems and installing advanced solutions that comply with evolving codes.

The A2L transition brings particular challenges for p-h-c contracting businesses, but also for distributors and manufacturers in this space. Starting Jan. 1, 2025, OEMs can no longer manufacture packaged rooftop units utilizing refrigerants with a GWP exceeding 700 in the United States. The Variable Refrigerant Flow (VRF) systems will undergo the mandated transition to Low GWP refrigerant on Jan. 1, 2026. Additionally, the EPA has banned the installation of complete systems with a GWP above 700 on Jan. 1, 2025. Through an additional rulemaking, EPA has clarified and allowed the installation of new systems until Jan. 1, 2026, if the components that make up the system were manufactured or imported prior to Jan. 1, 2025.

The EPA's phase-down of HFCs is expected to reduce emissions by 4.6 billion metric tons of CO_2 equivalent between 2022 and 2050—a reduction comparable to removing over 25 million railcars worth of coal from the energy mix.

Source: Lennox Commercial via The ACHR NEWS

Evolving consumer expectations and increased competition

Home and business owners expect faster service, transparent pricing, and sustainable solutions. This drives competition among contractors to differentiate through exceptional customer service and innovative offerings.

Transparency is more important than ever, with consumers expecting clear communication about pricing, project timelines and service options. Additionally, customers prioritize fast response times and seamless digital experiences, from online booking to automated maintenance reminders. These shifting expectations are pushing contractors to adopt innovative technologies, expand service offerings, and enhance customer service to remain competitive in a demanding market.

Additionally, as Sheridan noted in the AHR Trends Report, the acquisition and consolidation of plumbing and HVAC contracting businesses by private equity groups continues to be a notable trend in the industry.

Private equity firms continue to invest heavily in the sector, attracted by its steady demand and growth potential. This influx of capital is enabling larger firms to acquire smaller businesses, leading to industry consolidation. While consolidation offers benefits like improved access to resources, advanced technologies, and streamlined operations, it also creates challenges for smaller, independent contractors who may struggle to compete with the scale and marketing power of larger, consolidated entities.

Callies told *Plumbing & Mechanical* that personalized service is a contractor's secret weapon. *"Build relationships with your customers, know them by name, and provide that extra level of attention. Focus on a niche, whether it's high-end homes or green plumbing, and market yourself like a pro."*

Training and upskilling employees will continue to be key for plumbing and HVAC contractors to remain competitive in the 2025 market. *"Training is key," Callies noted in the Plumbing & Mechanical article. "Smart systems, green solutions, and digital tools are the future. Learning these skills now will save you and your employees from being the last person who doesn't know how to install a smart faucet. Nobody wants to be *that* plumber."*

Associations like PHCC can help mitigate these challenges for smaller contracting firms by providing access to training programs, operational efficiencies peer groups and more to help them stay competitive in a consolidated market.

Economic uncertainty

Economic uncertainty in 2025 is likely to impact plumbing and HVAC businesses by creating fluctuations in demand, affecting cash flow and increasing caution among both contractors and their clients. Rising interest rates and inflation may cause homeowners and businesses to delay non-essential upgrades or large-scale projects, prioritizing repairs and maintenance over new installations. This could reduce revenue opportunities for contractors, particularly in the residential and commercial construction sectors.

At the same time, businesses may face higher operating costs due to elevated prices for materials, fuel and insurance, further squeezing profit margins. Contractors will need to carefully manage their budgets, optimize operations, and maintain transparent communication with customers about pricing.

On the positive side, ongoing demand for essential services, combined with government incentives for energy-efficient upgrades, may help sustain baseline activity. Contractors who diversify their offerings, focus on preventative maintenance plans and adopt efficiency-boosting technologies will be better positioned to navigate the uncertain economic climate while ensuring business resilience.

PRODUCT AND TECHNOLOGY TRENDS

Technology adoption and digital transformation

Traditionally, the skilled trades often trailed behind technology adoption, but not any longer. Today, home services are on the leading edge of adoption of artificial intelligence (AI). There is an overabundance of AI software companies in the market today specifically to help plumbing and HVAC contracting businesses streamline operations and boost efficiency and profitability.

Technological integration was one of the key areas identified by Deloitte in its 2025 Engineering and Construction Industry Outlook:

"Digital tools and technologies are being explored across the value chain to enhance productivity, streamline operations, bolster safety, and improve the customer experience. Companies are leveraging digital tools and AI to increase their capacity and capabilities, aiming to offset labor shortages by using these technologies to help optimize a portion of work hours. Companies will likely invest in the next wave of transformative technologies such as augmented and virtual reality, generative AI (gen AI) (over the next one to three years), and even more autonomous gen AI applications like agentic

AI. Construction firms could continue to reinvent operations as these high-performance and cutting-edge technologies become more of a reality."

Data centers are hot

The growth of digital technologies, cloud computing, AI and increasing demand for data storage and processing capabilities have driven explosive growth in the data center market. According to FMI's Q4 2024 Engineering & Construction Outlook, the U.S. Census Bureau recently released and began publishing monthly private data center construction spending as a subset of office. Monthly private data center spending data through the first eight months of 2024 shows a 60% increase in investment above 2023 levels. Conversely, nondate center private office spending is down nearly 15%.

Sustainability is also shaping the trend, as companies and governments push for greener operations, leading to investments in energy-efficient data centers powered by renewable energy sources. Innovations like liquid cooling systems and advanced HVAC solutions are addressing the massive energy demands and thermal management challenges of these facilities. As businesses increasingly rely on data-driven operations and edge computing grows to support localized processing, data centers are becoming the backbone of the digital economy, driving investment and development in 2025.

The demand for optimized, energy efficient solutions in data centers is creating new opportunities for p-h-c contractors to become the expert of choice in the data center cooling niche as the market continues to expand in the coming years.

Energy-efficient, sustainable solutions

Today's home buyers are looking to live their values, seeking out homes with sustainable and environmentally friendly features, according to Zillow's 2025 Home Trends Report.

"Technology has enabled homeowners to live more sustainably and more affordably, which is a growing priority for prospective buyers," said Amanda Pendleton, Zillow's home trends expert. "Energy-efficient and climate-resilient home features are quickly gaining popularity as homeowners look to keep costs down, including insurance costs."

According to Zillow, mentions of whole-home batteries have surged by 62% since last year, the fastest-growing feature in this year's analysis. Whole-home batteries store excess energy from solar panels, acting as a generator during a power outage or when the sun isn't shining. Solar panels are appearing 18% more often in for-sale listings on Zillow, as are the terms "sustainable" and "green." In addition, electric vehicle (EV) chargers are appearing in 34% more for-sale listings on Zillow today than a year ago. And electric ranges are gaining traction, too. Mentions of induction cooktops are up 5%.

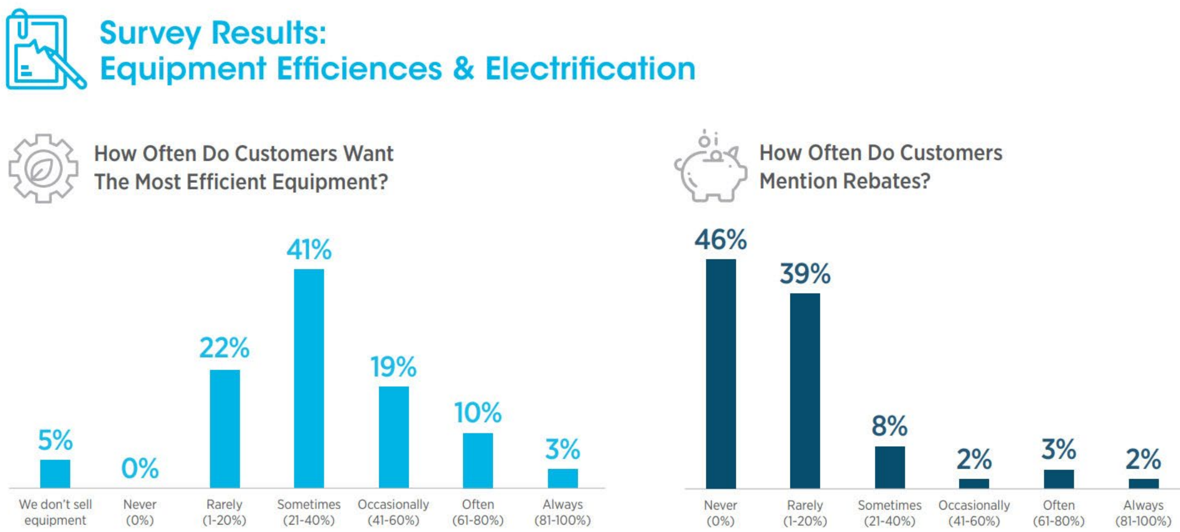
Climate resiliency is also important, per the report. *"With climate-related disasters becoming more frequent, sellers are highlighting features that offer some degree of protection, and buyers are seeking them out. Zillow research finds that 86% of recent home buyers say it's very important that a home have at least one climate-resilient feature. The share of for-sale listings on Zillow that mention flood barriers is up 22% compared to last year, seismic retrofitting is up 20%, and references to water catchment systems are up 19%. Drought-resistant turf yards are showing up 14% more often compared to a year ago."*

In the 2025 AHR Trends Report, Sheridan noted that certain states — mainly New York, California and Massachusetts — continue to take more aggressive postures toward energy decarbonization policies.

"Our nation's energy portfolio must remain diverse as we transition to less carbon-intensive solutions. Regulatory changes to consumer water heaters, furnaces and boilers are concerning to our members, who cite increased costs to convert to these new products particularly when retrofits are necessary to accommodate those products."

Government incentives for energy efficient technologies is also driving adoption of more sustainable equipment. The Inflation Reduction Act marked its second anniversary in 2024. The act provides over $369 billion in funding for energy and climate programs. Tax incentives have spurred interest in residential heat pumps for heating and cooling.

However, there is still much uncertainty when it comes to these government rebate programs which places more of a burden on p-h-c contractors. Contractors are particularly concerned about how rebates will work and whether they will be fully compensated by the time work starts, how long they will have to wait to receive compensation, how long a homeowner will have to wait to have work performed, and whether the rebate will be sufficient to offset costs.”



Source: 2025 AHR Trends Report

Smart plumbing technology and fixtures

Much like the last year, smart plumbing technology and fixtures are expected to continue to gain significant traction as homeowners and business owners prioritize convenience, sustainability and water conservation. Devices such as leak detection sensors, water flow monitors, and smart faucets are becoming more common in residential and commercial settings, helping users identify issues early and reduce water waste. Advanced fixtures with app integration allow homeowners to track water usage in real-time and set consumption goals, aligning with growing environmental awareness. Commercial properties, particularly in hospitality and multifamily housing, are adopting these technologies to improve operational efficiency and enhance tenant satisfaction.

Additionally, predictive maintenance features in smart systems enable contractors to provide proactive service, reducing costly emergency repairs. As these innovations become more affordable and government incentives encourage adoption, smart plumbing will be a key growth area, transforming how plumbing systems are managed and maintained.

IN CONCLUSION

Once again, strategic planning and adaptability will remain the keys to success as p-h-c contractors gear up for the challenges and opportunities in 2025. The plumbing and HVAC industries, like many others, are influenced by economic fluctuations, technological advancements and changing consumer behaviors. As Sheridan noted in the AHR Trend Report, “The industry is entering a period of change that can offer significant opportunities for both consumers and contractors.” Those p-h-c contractors who embrace these opportunities and implement strategies to enhance their companies' success will stand out and thrive in the competitive landscape.