BURNS McDONNELL

CONSTRUCTION MARKET UPDATE

Q2 2024

I don't like to spend much time thinking about politics, but it feels to me like those of us in the construction industry are just waiting to exhale. Let's just get through November so we can get on with things, regardless of who's occupying the house on Pennsylvania Avenue.

In the meantime, we'll keep watch over the economic conditions, which are starting to feel a lot like a "new normal." High interest rates caused much anxiety at first because we hadn't seen anything like it in years. But "hadn't seen anything like it" is now going on two years, with no indication that the Fed will provide relief. Those of you who have held off on your capital spend might be starting to feel like it's time to pull the trigger.

Those of you who have started projects might have noticed lead times have eased a bit on some construction materials but have remained stubborn for electrical components like transformers and switchgear. In this quarter's Market Update, we have provided some helpful information for you to navigate those lead times as you embark on projects.

Also in this quarter's update, we have a summary for you of the EPA's recent moves. They have been on a tear lately, with new air quality rules for chemical plants, drinking water standards for chemicals collectively known as PFAS, new rules on coal-fired power plants, and new emissions standards for light-duty and heavy-duty vehicles.

It's the last of those that our own Kyle Pynn dives into a bit more in this issue. Many of our clients maintain fleet vehicles, and if current trends continue, more of them will need to consider electrification. As a fleet owner or an electric utility, what do you need to think about if this transition continues?

Thanks for reading, and live safer.

BRETT'S THREE TAKEAWAYS

1. HIGHER INTEREST RATES ARE STARTING TO FEEL LIKE THE "NEW NORMAL."
2. LEAD TIMES HAVE EASED A BIT BUT REMAIN STUBBORNLY LONG FOR ELECTRICAL COMPONENTS.
3. WHAT DO OWNERS NEED TO KNOW ABOUT THE INCREASING TREND TOWARD FLEET ELECTRIFICATION?

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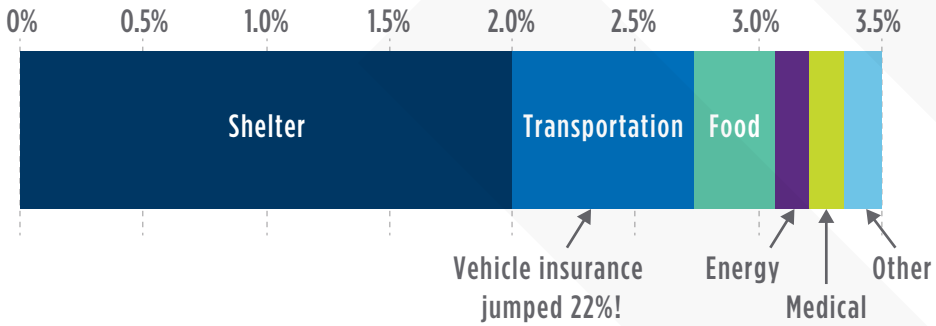
ECONOMICS

In Q1 2024, real gross domestic product increased 1.6%, which was lower than expected, but is not by itself a cause for concern. While there has been talk that wage growth (4.1% over the last year) could contribute to inflation, wages have not been squeezing business margins overall. On the contrary, the rate of profit increased to 16.3% of value added in 2023, compared to 13.5% from 2010-2019.

Continued stickiness with inflation is largely due to housing, which accounted for 60% of the consumer price index's (CPI) 3.5% increase over the last year (data through March 2024). Right now, high interest rates appear to be a barrier to housing prices coming down. Households that locked in mortgage rates of 3%-4% are hesitant to sell their house and take on a new mortgage at a 7% rate. The lack of housing supply has kept the homeowner vacancy rate below 1% — lower than at any time prior to the pandemic. Single-family housing construction has been trending upward, which will help the supply situation, but not immediately.

The consumer price index was up 3.5% in the year ending March 2024.



INDUSTRY OUTLOOK

Nonresidential construction spending has been relatively flat since November 2023. Construction spending on power has fallen over the past three months. Manufacturing has been mixed, with drop-offs in food/beverage and chemical offset by growth in computer/electronic/electrical and transportation equipment. The Institute for Supply Management's Manufacturing PMI index rose to above 50% in March, the first time the index has signaled manufacturing expansion since September 2022.

Construction hiring and wages have been strong. The Federal Reserve's Wage Tracker shows construction wages up 6.3% over the last 12 months. Labor availability and interest rates continue to challenge potential new projects.

While lead times have improved for many construction materials over the past year, extended lead times persist for transformers, switchgear and other electrical components.

SEE DETAILED LEAD TIME DATA ›

Construction forecasts for 2024 show some divergence. FMI is forecasting a recession in 2024 but still expects nonresidential construction spending to grow by 9%. Dodge is predicting 6.7% growth in nonresidential construction starts in 2024, while ConstructConnect expects 3.3% growth (construction starts precede construction spending by about a year).

Engineering firms report strong finances and a positive view of their own industry. While firms have consistently ranked their own finances better than the economy, industry views on the economy improved from net negative to net positive in Q1 2024. Looking forward, firms have a positive outlook for most sectors, especially transportation, water and energy/utilities, with a negative outlook for the commercial sector.

CONSIDERING FLEET ELECTRIFICATION? FIRST, UNDERSTAND WHERE THE MARKET IS HEADING AND WHAT FACTORS ARE AT PLAY. ›

NEW EPA GUIDELINES

The EPA has been busy lately, making several announcements in March and April:

- A final rule to reduce air pollution from chemical plants.
- National drinking water standards issued for chemicals (per- and polyfluoroalkyl substances, known as PFAS). In addition to setting limits for these chemicals in drinking water, the Biden administration also announced $1 billion to fund detection and treatment systems, which is just a portion of the significant funding allotted for water infrastructure as part of the Infrastructure Law.
- New rules on coal-fired power plants that require drastically lower levels of carbon dioxide and pollutants.
- New emissions standards for light-duty and heavy-duty vehicles.

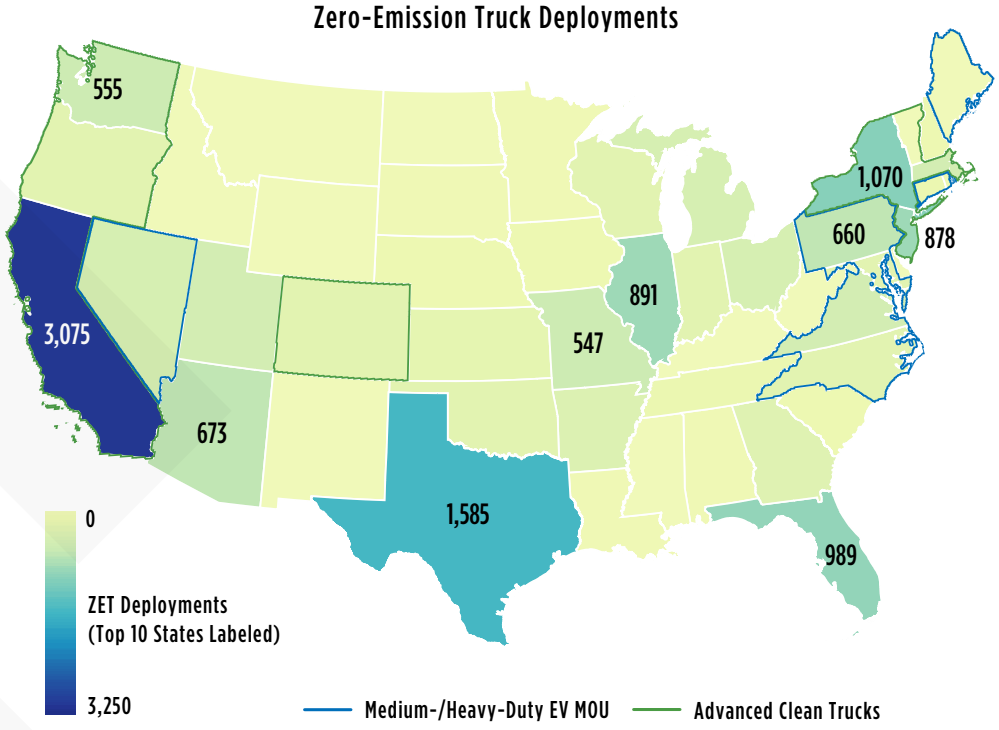
ZERO-EMISSION TRUCKS

As with previous standards, new vehicle guidelines apply to all heavy-duty vehicles in an automaker's fleet, including cargo vans, buses and 18-wheelers, starting with the 2027 model year. Automakers could meet the standards with electric or fuel cell vehicles.

In addition to the federal guidelines, the Advanced Clean Trucks rule has been adopted by 11 states. Another seven states and Washington D.C. have signed a memorandum of understanding (MOU), committing to advance the market for electric medium- and heavy-duty vehicles (see map).

Incentives for zero-emission vehicles and related infrastructure include:

- The federal government offers incentives such as tax credits for the purchase of electric or fuel cell commercial vehicles and alternative fuel infrastructure, grants for refueling infrastructure, and incentives that apply specifically to buses and port vehicles.
- 12 states have some type of clean truck incentive program.



Source: CALSTART

- 22 utilities have programs that offer rebates or other incentives for charger installations.

The bulk of zero-emission truck (ZET) deployments have been smaller vehicles. Amazon is leading the way, having deployed over 10,000 electric cargo vans through June 2023, roughly 56% of total U.S. ZET deployments since 2017. California is the top state for deployments with 3,075 from 2017-June 2023 (Calstart). In 2022, 7.5% of trucks sold in the state (including light-duty) had zero emissions.

IMPLEMENTING AN INTEGRATED PROJECT APPROACH STREAMLINES DELIVERY OF COST-EFFECTIVE EV CHARGING STATIONS. ›

MAKING THE SWITCH: WHAT IT TAKES TO TRANSITION TO AN ELECTRIFIED FLEET

Media coverage around the topic of electrification has significantly increased, often highlighting fleet conversion as a critical first step in the transition to electric power. Driven by federal policy, state regulations and individual company goals, there's a growing desire to reduce carbon emissions and operating costs by way of electrifying fleets.

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California, for instance, requires that 10% of registered vehicles be zero emission by 2025. Sixteen states are following its lead. Auto manufacturers are trending that way as well. Audi, a Volkswagen brand and one of the largest manufacturing companies in the world, will cease research and development of internal combustion engines by 2026, with plans to be all EV by 2032. Ford, General Motors and Toyota are converting their fleets as well.

Then comes the question of how to make the switch. For any fleet electrification project, business owners must understand the facts, technology and potential impacts to business; proactive planning, consulting and timely procurement are key to a successful transition. After compliance, site layout options and vehicle manufacturers have been researched, an EV fleet — cars, buses and/or trucks — must have sufficient charging stations, including Level 2 and DC fast chargers, for overnight and rapid charging. Proper maintenance facilities, data and network systems, and electrical upgrades are other critical components for maintaining an electric fleet.

But upgrading electrical infrastructure comes with its own set of challenges. No site or city is the same, and electrical components, such as transformers and semiconductors, remain in high demand. Plus, many areas will need grid enhancements to support the additional load from fleet charging stations.

This increase in — and understanding of — power load for an electrified fleet has many owners in unknown territory. Not many have interacted with the utility in this capacity and might need to double or triple their load on-site. Knowing how to navigate these conversations is imperative. If vehicles are purchased before charging infrastructure is in place, new (and expensive) electric vehicles could sit idle on the lot.

If incentives and industries continue to progress in this direction, many fleets will be impacted by this transition: commercial fleets, food and beverage, ports, rail, mining, airports and more. Moving toward a more electrically powered future brings the potential to redefine how we power our daily lives and operations.