2022 Q3

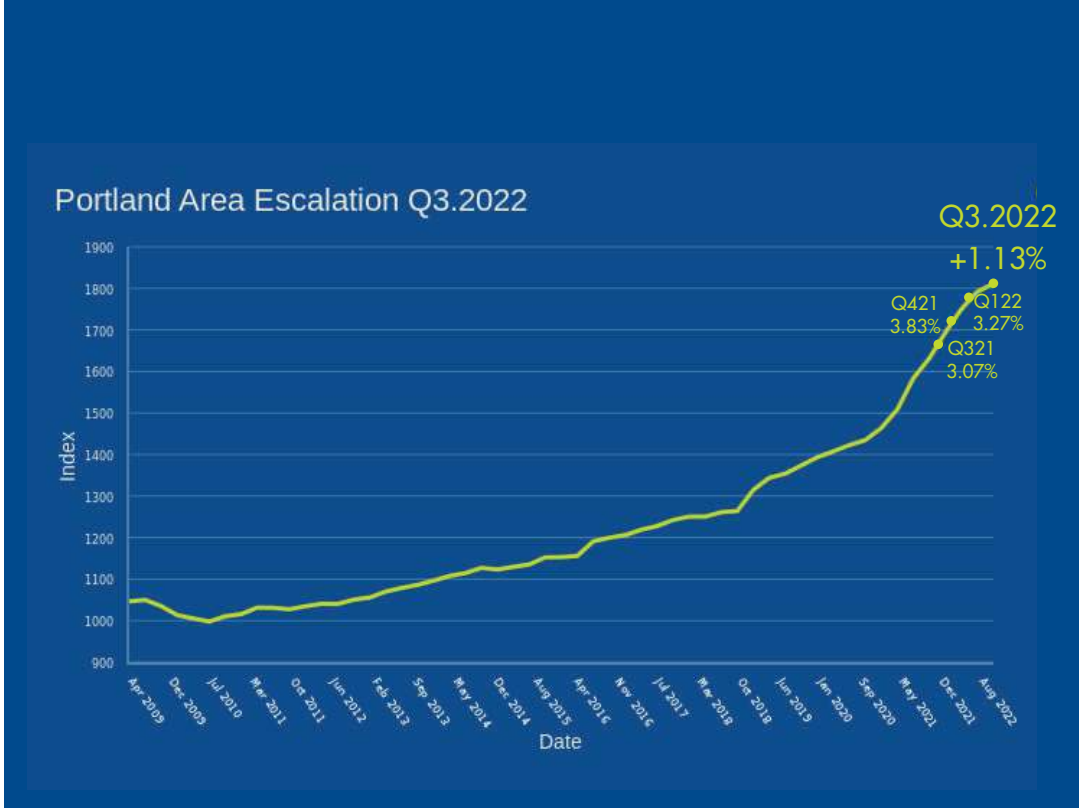
THE LOOK AHEAD

Market Overview

The third quarter of 2022 failed to yield concrete indicators as to how soon we can expect rate hikes to stabilize inflation or how long it will take to dig out of an impending recession. It seems the good news of a strong labor market is now the bad news of persistent inflation and experts are taking a day-to-day approach when casting predictions. In this issue, we feature a look at trends driving construction in the industrial sector as well as the extreme growth manufacturing has experienced. We also dive into the structure of the Federal Reserve Bank, how rates are controlled, the factors contributing to the global energy crisis, and provide our thoughts as to the onset and duration of the predicted recession.

THE PORTLAND MARKET

The NW Market continues to see significant growth in semiconductor and data center work with a solid pipeline of public sector projects with specific opportunities in law enforcement, courthouse and municipal public works. Local higher education institutions have large capital projects in their master plans over the next several years, however, many will be contingent on state funding and/or significant donor opportunities. Healthcare is gaining traction with a new $650M facility at OHSU in Portland scheduled to be complete in 2026. We are also seeing healthcare renovation work return after a pause for the pandemic. Material lead times continue to impact projects with generators, electrical gear and certain HVAC equipment being of particular concern. Material prices have begun to flatten, but trade partner bids continue to rise as firms are still trying to catch up from historical increases experienced by the market. Labor is tight with specific concerns around electricians due to the demands of semiconductor and data center work.



LABOR & MATERIAL TRENDS THIS QUARTER			
Labor Wage Change		**Material Price Change**	
Carpenter	0.00%	Fabricated Steel	-5.04%
Laborer	0.00%	Fabricated Copper	-11.54%
Sheet Metal Worker	0.00%	Fabricated Aluminum	-12.21%
Plumber/Fitter	0.00%	#2 Diesel Fuel	-10.23%
Electrician	0.00%	4,000 psi Concrete Ready Mix	3.05%
Bricklayer	0.00%	Lumber, FOB Jobsite	4.89%
Iron Worker	0.00%	Glass	3.50%
Glazier	0.00%	Sheet Metal	0.70%
Roofer	0.00%	Gypsum	0.00%
Operator	0.00%	Other Materials	2.93%

Other Materials consists of brick, block, precast insulation, floor covering, ceilings, and Miscellaneous materials

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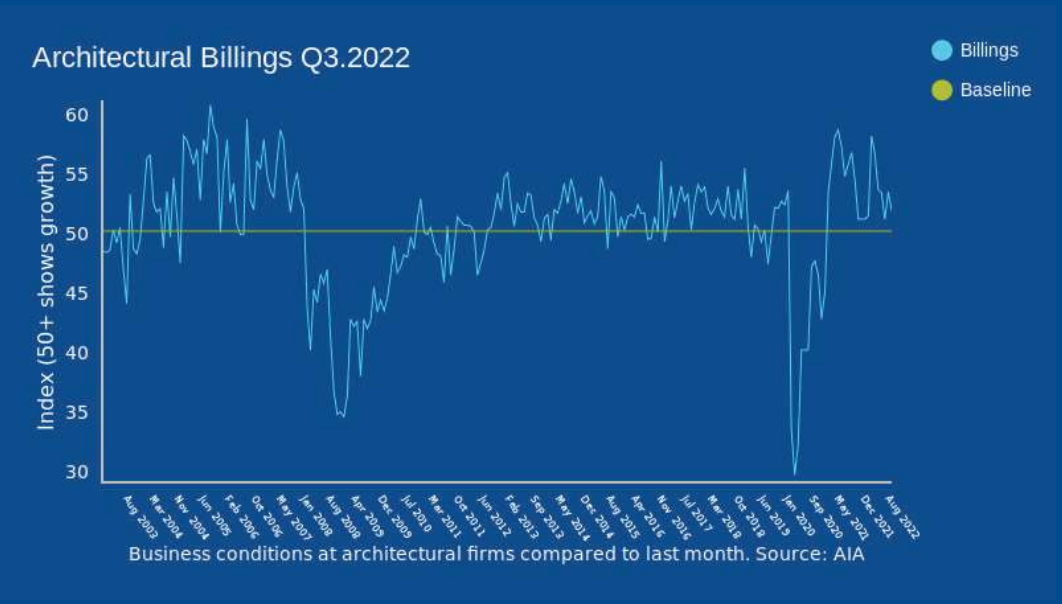
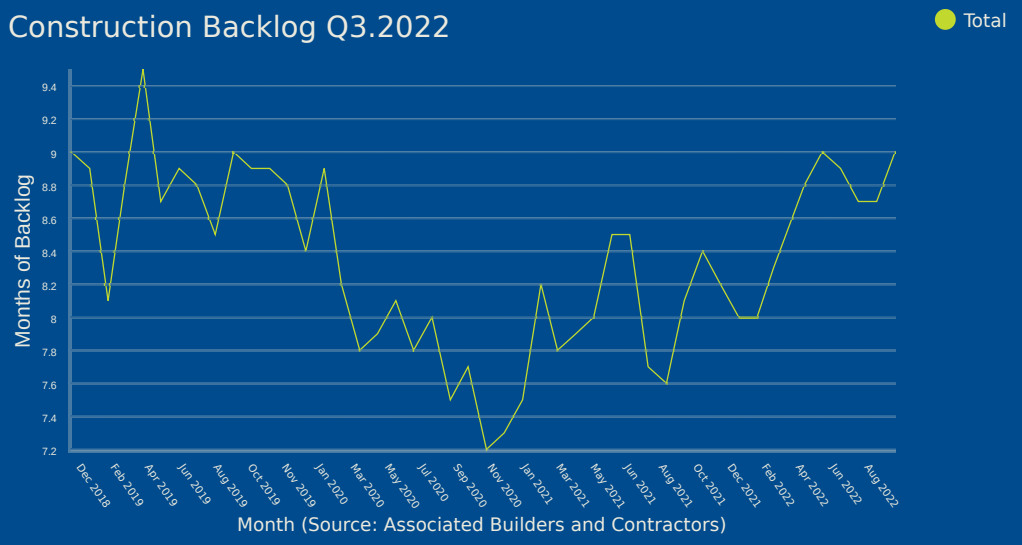
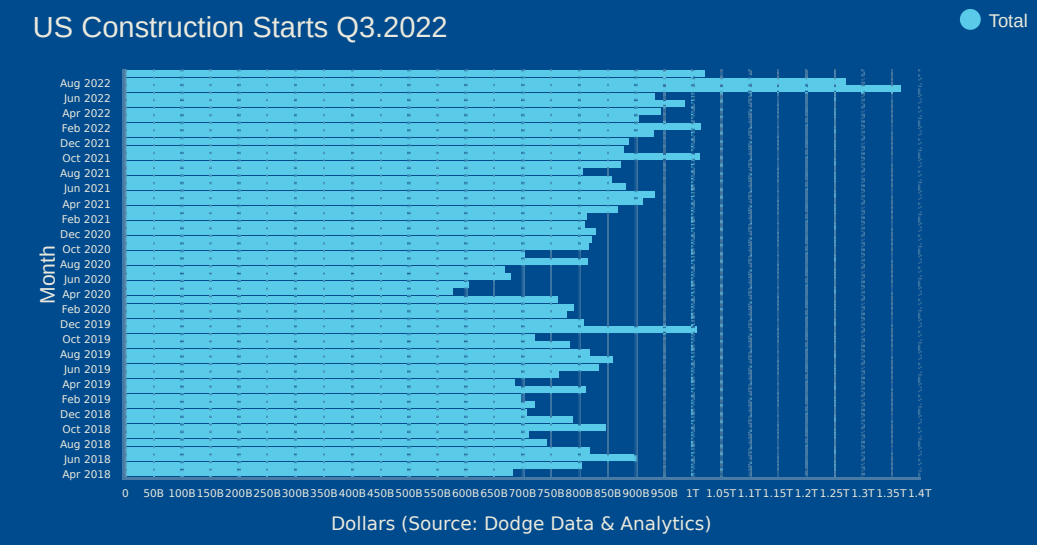
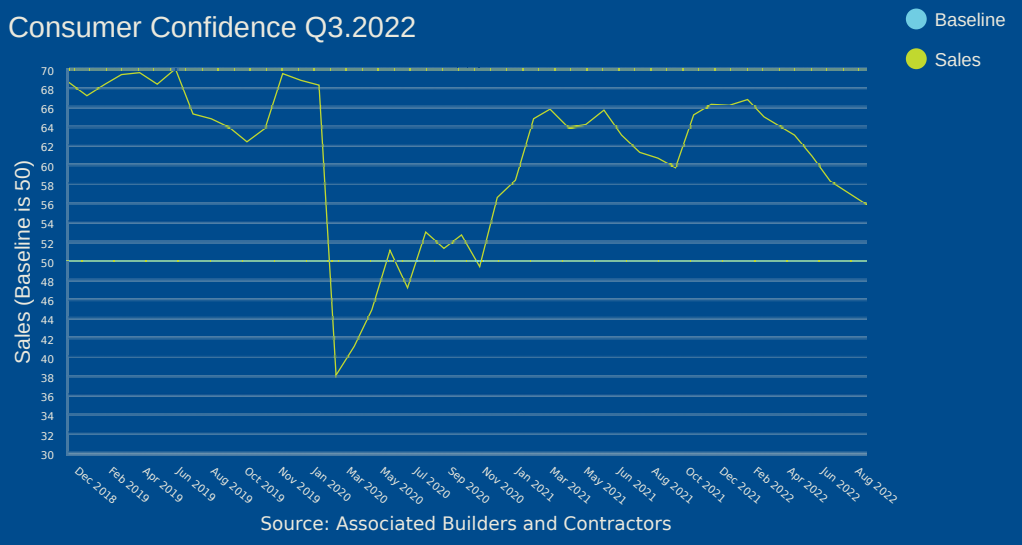
NATIONAL CONSTRUCTION INDICATORS ACTIVITY & PRICING METRICS



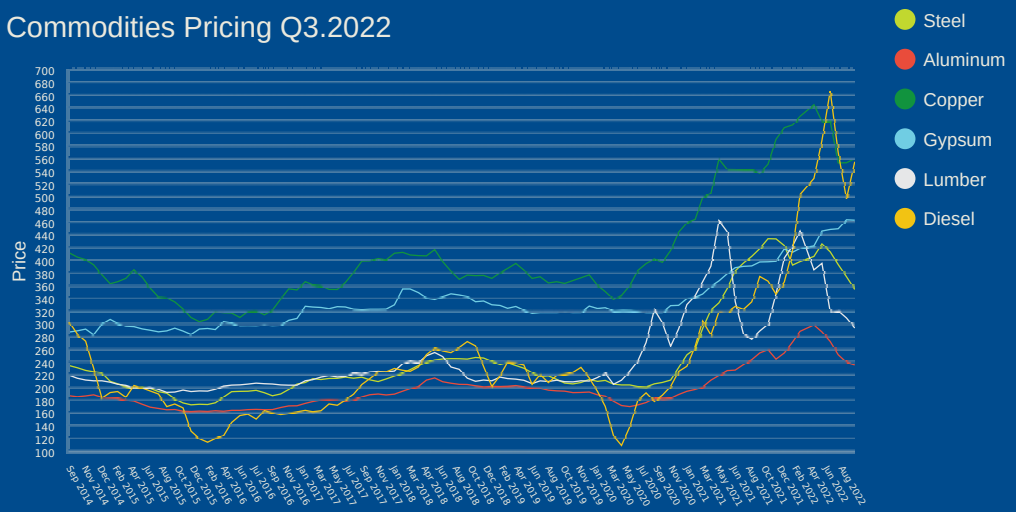






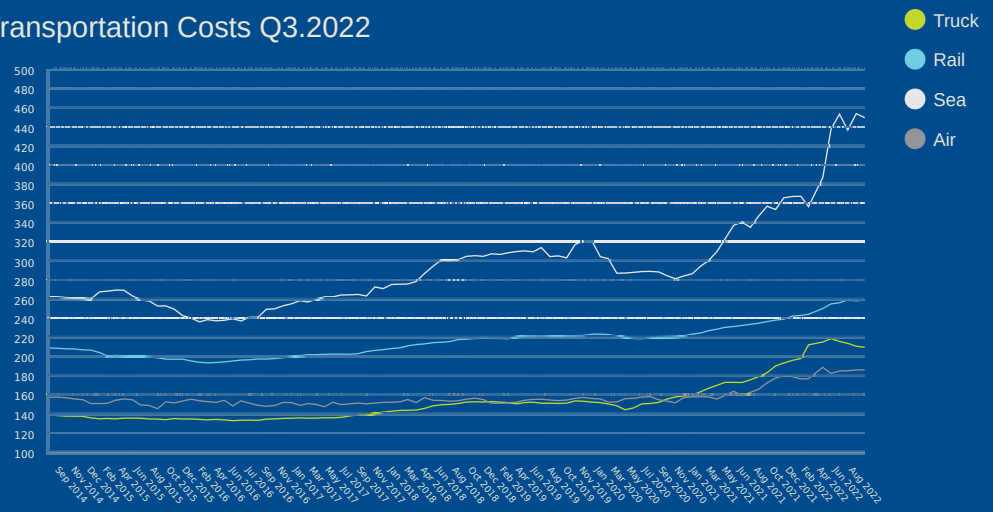
NATIONAL CONSTRUCTION INDICATORS ACTIVITY & PRICING METRICS

Commodities Pricing Q3.2022



Source: www.bls.gov

Transportation Costs Q3.2022



Month (Source: www.bls.gov)

FUTURE ISSUES

As feedback and market-specific questions have been posed, we are always enhancing the depth and type of information The Look Ahead features. Our next issue will provide an outlook for 2023. Please click here to send your comments and requests.

INDUSTRIAL SPOTLIGHT

For the past eight years, JE Dunn has had a team focused on building industrial facilities. They have seen a significant uptick in auto and battery manufacturing in the past three years, and as the demand for online ordering and delivery has skyrocketed, so has the need for warehouses and distribution centers. These increased demands—paired with a struggling supply chain—have resulted in the busiest industrial sector on record. In this spotlight, Steve Haglund, Senior Preconstruction and Estimating Manager for JE Dunn's industrial team, discusses current trends and the best ways to navigate challenges.

CONSTRUCTION GROWTH

Most industries gauge growth by their Purchasing Managers Index (PMI) score. The PMI is an index of the prevailing direction of trends that purchasing managers are experiencing in terms of new orders, employment, production, supply, and inventories and a score of 50 or above indicates growth. The U.S. manufacturing sector has experienced this growth for the past 28 months.

Construction spending to build, expand, or renovate manufacturing facilities hit an all-time single month high of $97B nationwide in June of this year.[1] However, the most staggering statistic is this one: dollars spent on construction of new manufacturing facilities in the U.S. has soared 116% over the past year, dwarfing the 10% gain on all building projects combined, according to Dodge Construction Network.

Two factors contributing to this growth are reshoring and investments in electric vehicles.

RESHORING

While reshoring is generally defined as moving your operations back to U.S. soil, it also can mean adding and changing to suppliers located in the U.S., which a record number of companies are doing, contributing to the growth discussed earlier. In a March 2021 survey performed by Thomas, an industrial-focused research company, 83% of manufacturers said they are "likely" to "extremely likely" to reshore. This number was 54% in March of 2020.

These companies cited Total Cost of Ownership (TCO) as the top factor when considering reshoring their supply chain.[2] In this sector, TCO refers to all costs related to acquisition, transportation, and storage of the products within the supply chain.

Recent history is riddled with offshore delays that have left overseas savings unrealized. Even with U.S. TCO coming into balance, price is still the main deterrent to reshoring, but improved turnaround times and material availability are making it a more attractive option to manufacturers as they try to "future-proof" their supply chains.

ELECTRIC VEHICLES AND BATTERIES

California made history in August when regulators agreed to ban the sale of new gasoline-fueled cars by 2035. Because the state is the largest auto market in the country, the measure could lead to a major shift across the country. California had to go first according to federal law, and now states can piggyback on to the California rule, which Governor Baker of Massachusetts has pledged to do. Washington state will follow California and prohibit the sale of new gas-powered vehicles by 2035.

With that planned increase in electric vehicles comes the batteries to power those vehicles. Thanks to the passage of the Build Back Better incentives in July, the demand has been pushed even higher, as tax credits offered in the incentives require that both the car and battery be manufactured in the United States.

The pace of this investment is accelerating; in 2022 alone, companies have announced $13 billion in domestic electric vehicle (EV) manufacturing, which is more than triple the investment in 2020.

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MEETING THE DEMAND

Clearly, the demand for these facilities is great, but the sheer size of these facilities is also contributing to two more trends. First, the projects are huge in square footage and budget, now termed "mega projects" within the construction industry. The acquisition of the land and name of the company looking to build is often confidential and the speed to market is incredibly rapid. In some cases, we are hired and need to be moving dirt in mere weeks, despite just finding out the name of the client and type of facility being planned.

Second, in order to manage and staff projects of this size at such a rapid pace, we are delivering most projects in a collaborative fashion. It's not only desired, but NECESSARY. Efficiencies such as phasing construction to keep production lines open, prefabrication, and locating the design and construction teams together on site so we can build as fast as they design are all being employed.

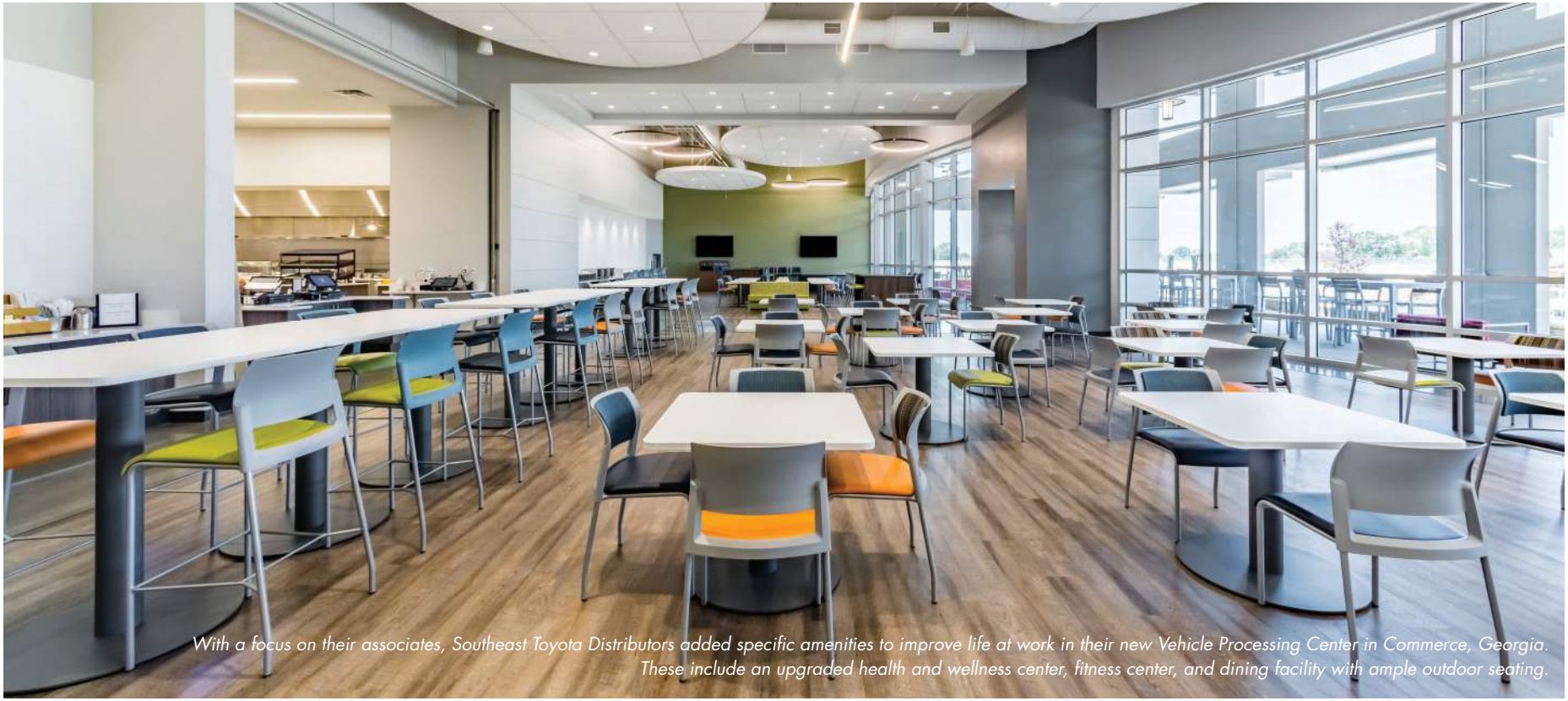
On one project currently under construction, JE Dunn led an intensive six-month early engagement process, involving all engineering and design disciplines to optimize coordination between building design and process decisions. A high level of trust quickly developed between stakeholders, leading to the ability to quickly overcome challenges.

As a result, the program has been optimized. The team was able to reduce building footprint by 200,000 SF without sacrificing program. This can be attributed to a culture of challenge and transparency, where the team freely analyzes budget, scope, permitting, and other typical road blocks. With everything out in the open, the best decision for the project is made. Design-build and other collaborative delivery methods make large-scale projects much more feasible in light of these challenges.

EMPLOYEE EXPERIENCE

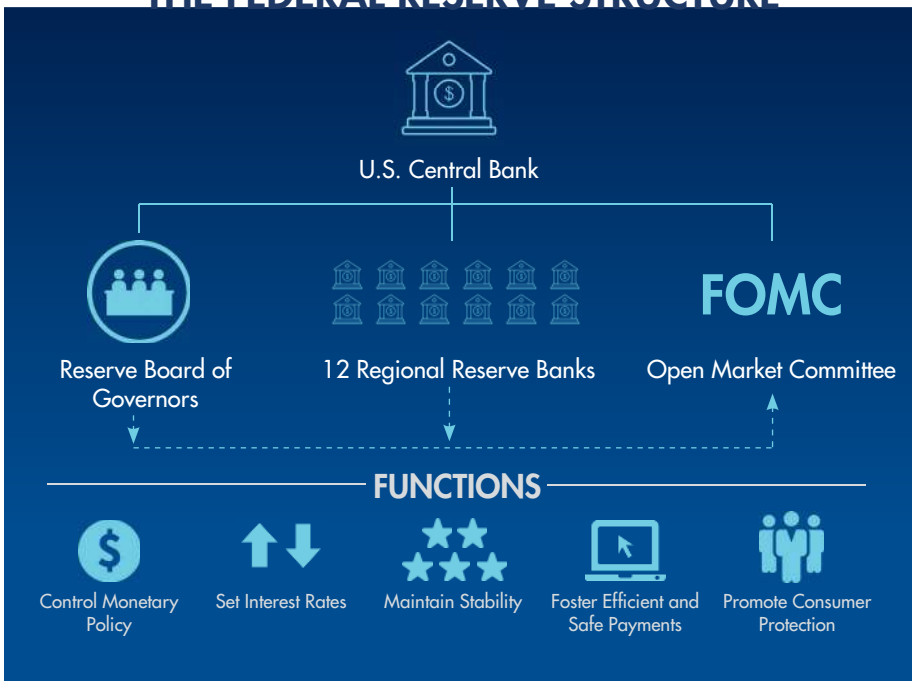
It's fair to say that every market is fighting for talent and labor. The industrial sector is no different. In addition to growth, they have a skilled workforce close to retirement age with the next generation of trained labor ready to roll in below them. A large portion of our manufacturing was outsourced to Asia 30 years ago, and the shortage caused by this generation's retirement has been building since. Employers are looking for ways to make all employees feel valued and respected by reducing the division between office and plant employees and offering more daylight and outdoor space traditionally lacking within manufacturing.

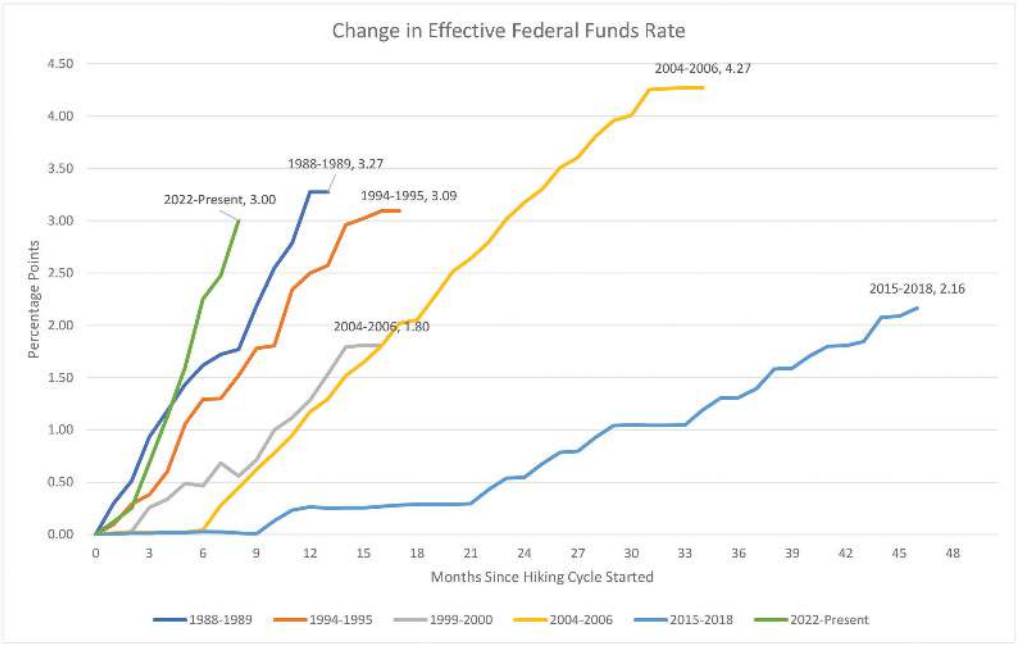
For more information on the industrial sector is upping their game to compete for talent, follow this link for an article written by JE Dunn's Design Phase Services Principal Architect, Tammi Bailey.



With a focus on their associates, Southeast Toyota Distributors added specific amenities to improve life at work in their new Vehicle Processing Center in Commerce, Georgia. These include an upgraded health and wellness center, fitness center, and dining facility with ample outdoor seating.

Sources: 1) stlouisfed.org 2) Thomasnet.com 3) whitehouse.gov





Source: Federal Reserve Bank of New York

THE FEDERAL RESERVE

The term "monetary policy" refers to the actions undertaken by the Federal Reserve (the Fed) to control the availability and cost of money and credit to promote national economic goals.[1] With our current economic volatility, the levers (primarily setting interest rates) typically used by the Fed to influence our economy, are under close watch.

The Fed's most often used tool for enacting monetary policy is manipulating the Federal Funds rate— the rate that drives what banks pay for money loaned to them (the Effective Rate). Raising this rate dampens intra-bank lending, limiting the funds available for banks to lend to consumers and businesses, thereby slowing growth by limiting the amount of capital spent on goods, services, hiring, and business investment. This action is primarily directed at the demand side of the equation and cannot directly address supply-side issues.

TAMING INFLATION

In simpler terms, inflation is either too much demand, not enough supply, or, as is usually the case, a combination of both. As mentioned, one of the effects of rate increases is limiting what businesses can spend on expansionary actions such as investing in equipment, technology, and workforce. As hiring slows, businesses can't maximize revenues, returns are lower, wage increases are lower, and fewer people are employed. As the unemployment rate rises, in general people have less money to buy goods and services which slows the Gross Domestic Product (GDP) in turn. This is the "good news is now bad news" we previously referenced. While driving up unemployment is painful, it is nearly impossible to slow an economy and reduce inflation without doing so.

SETTING RATES

In September, the Federal Reserve raised the rate for the fifth time in 2022, with this current increase and the last three increases coming in at a rate of 75 base points or 0.75%. In five months, the lending rate between banks (the Effective Rate mentioned earlier) has risen from 0.08% to 2.48%. The rate itself isn't as shocking as the steepness of the incline (shown in the chart above). Rates were at 2.4% as recently as 2019, but to increase 2.5% in five months is extremely rapid and unprecedented in U.S. history.

SWIFT CHANGES

Our economy has what is known as the Neutral Rate. It is the short-term real interest rate consistent with the economy maintaining full employment with

Sources: 1) Federalreserve.gov 2) Dallasfed.org

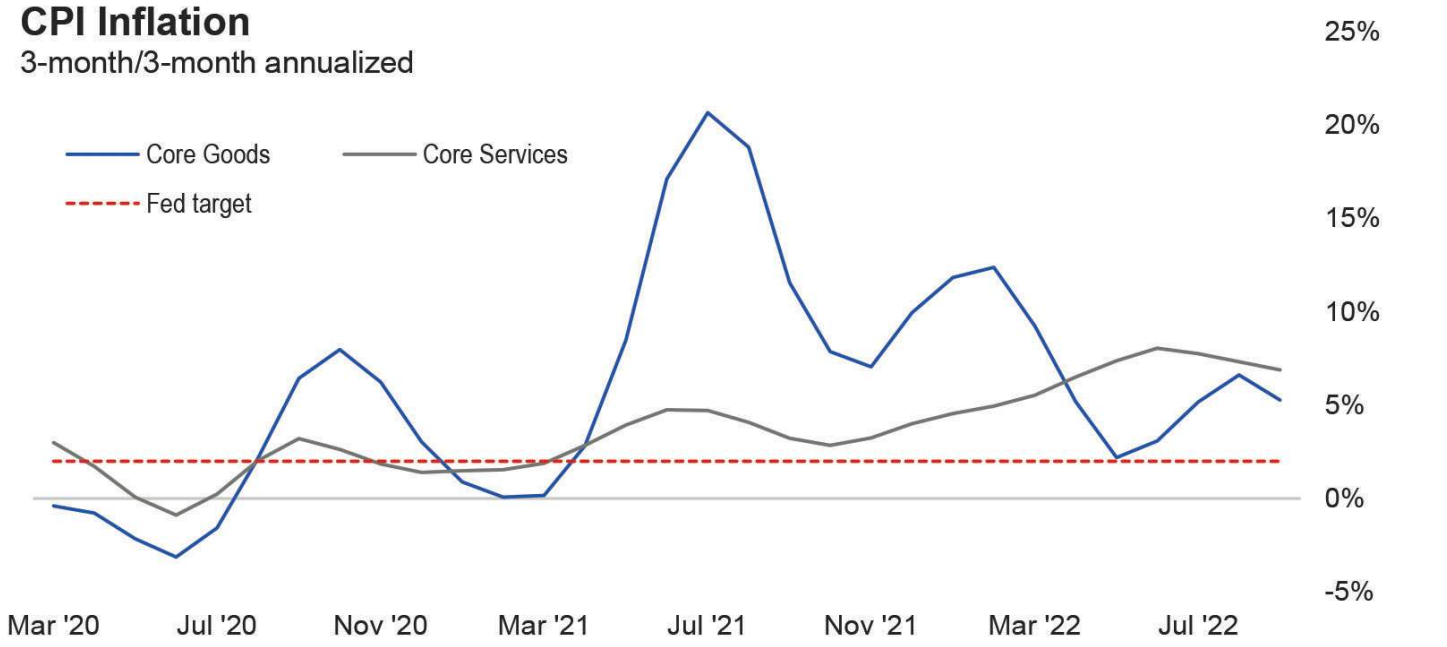
associated price stability; therefore it is a theoretical balance point where monetary policy is neither accommodative nor restrictive.[2]

The Federal Reserve desires to get beyond the point of neutral as quickly as possible because spending time above neutral secures price inflation into consumer's minds, and it becomes embedded inflation. Rate increases are coming quickly because once inflation becomes embedded, the Neutral Rate could increase. The Fed would then have to raise rates even further to get the desired result of reducing inflation.

Embedded inflation is the hardest to combat and is easiest to see in wage data. Wages are typically only set once a year, out into the future, and if inflation is "embedded" in the minds of the wage setters, you will see inflation built into the set wage that will continue to be paid out into the future, with the only chance to bring it down coming a year later. Thus, prolonging the effects of inflation in the first place.

Of course, the best way to combat embedded inflation is to root it out before it becomes embedded. For a historical look at embedded inflation, look at The Fed in the late 1970s and into the 1980s. At that time, it took double-digit unemployment to rid the system of the effects of inflation. This matters to us today because we are facing a similar inflection point in the rate battle.

In our next article, we dig into the current recession indicators where we will likely see the effects of rate increases in the labor market soon. At that point, the economy typically sees rising opposition to maintaining an elevated rate environment, but the Fed will have to stay the course with higher rates to tame inflation. Accordingly, we will then see lower GDP and negative growth ripple through the system. Money and credit availability will be constrained, unemployment will be markedly higher, raw materials prices such copper, lumber, and plastics will trend down and consumer sales, the lion's share of our economy, will be subdued.



Source: Bureau of Economic Analysis, FHN Financial

RECESSION WATCH 2022

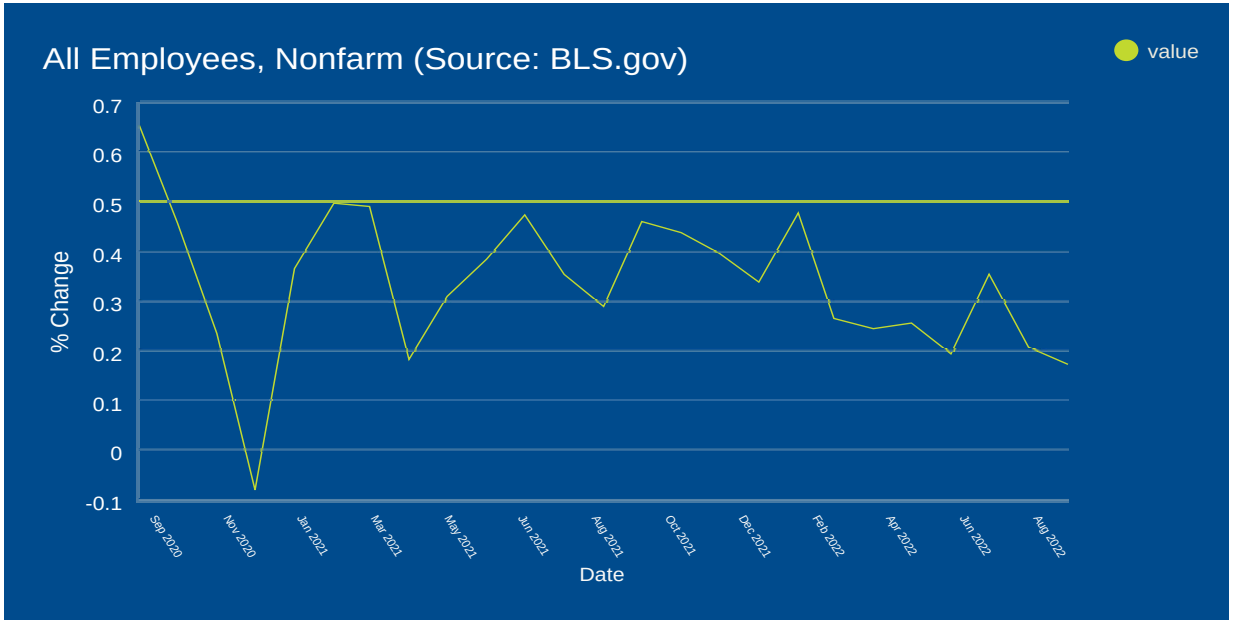
Is this a recession? This commonly asked question doesn't have a simple yes or no answer as it is subject to "expert opinion."

It is important to note that we have had fewer than 20 recessions in the post-WWII era. They are a natural part of a healthy economy. Our business cycle is comprised of expansion, peaks, contractions, and troughs, and the contraction portion of our cycle can help support even more robust expansion portions.

That being said, a few factors are universally agreed upon as recession indicators:

1) A Decline in Gross Domestic Product (GDP). The rule-of-thumb is "two consecutive quarters of negative change in GDP," but that is strictly a rule-of-thumb. The GDP did decline in Q1 and Q2 of 2022.

2) Higher Unemployment Rates. This is the sticking point of the current "is it or isn't it" argument. We've never had a recession with a labor market as hot as the current one, and it's problematic to label such growth as a recession. In our last issue (link at the bottom of this page) we examined the causes of the current labor shortage. As we discussed in our feature on the Federal Reserve, the goal is to strike that neutral rate where supply and demand are in equilibrium. When the labor market is hot, wages grow, and consumers are able to absorb higher prices in goods and services. The latest employment numbers show 263,000 jobs added, a 54.7% month-over-month increase. This is still roughly 50% larger than the average monthly job gains we experienced throughout the last expansion.



Which leads to the next typical condition of a recession:

3) Lower Consumer Spending. Increased wages do little good when inflation accompanies them.

Historically, a constriction in the labor market has led to the drop in demand and lower consumer spending needed to significantly combat inflation. Our economy needs to reach the point where consumers reject higher prices to make this correction. This will be what finally pushes us into recognizable recession, likely in mid-to-late 2023. This has been a difficult point to pin down mostly because of the explosion in the savings rate after the pandemic hit.

Prior to 2020, the U.S. Personal Savings Rate averaged just over 8%. After 2020, that average shot up to over 12% with a few months reaching almost 25%. This has given consumers the ability to weather higher prices for much longer than anticipated and blunted the effects of rate increases, sustaining demand, and prolonging the length of time we will have to be in a higher sustained rate environment.

It is important to note that the extent of the downturn is critical in labeling a recession, meaning recessions affect every industry and sector. While we are seeing a cooling off in Q32022, many industries are still experiencing rapid growth.

The National Bureau of Economic Research has a committee dedicated to defining our recession periods, the Business Cycle Dating Committee. What they look for is "a significant decline in economic activity that is spread across the economy and that lasts more than a few months."[1] Most recessionary periods in post WWII America last for less than 12 months, while expansions are closer to five years.

As we build budgets and schedules for our clients, keeping our eyes on the length and impact of a recession is critical to pricing commodities, scheduling manpower, and forecasting inflation.

Sources: 1) Whitehouse.gov Previous article on labor here.

ENERGY

Europe is currently experiencing an extreme energy crisis. The 27 countries that comprise the European Union (EU) are scrambling to access enough resources to make it through the upcoming winter. While the EU recognizes the necessity to shift to clean energy in the future, it will take decades to get there.

The situation in Europe reads like many other explanations of what is happening in the global economy, and it goes like this: COVID-19 shutdowns stalled production, demand outpaced supply when production was reinstated, and then Russia invaded Ukraine, resulting in immediate fears while also complicating the overall issue and recovery.

How does this impact the United States in the short term and down the road?

EXPORTS AND IMPORTS

According to the U.S. Energy Administration, the U.S. produced most of the energy consumed domestically until the early 1950s. It was then that we started to import more crude oil and petroleum products to match our consumption to production. These imports increased annually for the most part until they peaked in 2007. Since then, we have increased our energy production, invested in renewable sources, and looked to alternative fuels, making us a net exporter rather than importer. Even as a net exporter, the U.S. still imported petroleum from 73 different countries in 2021— underscoring just how reliant we are on the global economy and supply chain regardless of our domestic production.

Russia provides 45% of Europe's oil and gas, and they have greatly reduced their pipeline supply in recent months. Russia states this is retaliation for the economic sanctions imposed on them after invading Ukraine. The reduction is causing more supply chain delays, driving up the price of goods, and sending energy bills upward. The EU fears that this will result in a rationing situation through the most bitter parts of the winter. While our reliance on Russian imports is minimal (3% of our crude oil and 8% of our petroleum), our involvement in the global supply chain makes us a secondary object of Russia's control.

GAS PRICES

Like so many other essential goods that Americans rely on every day, the price of gasoline has experienced significant volatility in 2022. Due to production shortfalls and demand increases, U.S. gasoline prices had an unusually steep runup from January to June. In July, prices began to tumble thanks to recession fears, including anticipation of lower future demand as people lose their jobs > no longer need to drive to work > consumers no longer have the disposable income to spend on shopping trips or travel. This rationale drove down oil prices just as we were entering the seasonal downshift in gas demand as summer vacations wound down.

At the same time, the Biden administration released additional oil supply from the Strategic Petroleum Reserve, helping pull down costs to a small degree. In September, prices began to rise, likely due to the normal swings of market correction. However, at the beginning of October, the Organization of the Petroleum Exporting Countries (OPEC+) announced supply cuts—or rather a decrease in the limit they self-impose on their cartel. The practical effect of the move will probably be small, as most of the oil producers were already below the previous production limit and will remain below the newly imposed limit as well.

Still, the announcement led to a temporary price rally. We have since seen prices come down slightly in late October, but this amount of movement helps underscore how sensitive and volatile our global economy is today. Domestically, the EIA forecasts retail gas prices to be an average of $3.80 per gallon in 2022's 4th quarter and predicts they will drop to an average of $3.57 per gallon in 2023.

While gasoline prices are predicted to come down, the EIA is warning consumers to prepare for steep home heating costs. They project the following increases this winter:

We continue to research and examine the environmental, cost, and schedule standpoints of alternative energy sources for our clients. We plan to present an in-depth look at the Total Cost of Ownership for renewable and alternative energy in an upcoming issue.