THE ECONOMY AT A GLANCE
HOUSTON

GREATER HOUSTON PARTNERSHIP
Making Houston Greater.

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LEADING THE ENERGY TRANSITION

In late June, the Greater Houston Partnership released its blueprint for leading the global transition from traditional fuel sources to low-carbon and no-carbon energy. Titled, "Houston, Leading the Transition to a Low-Carbon World," the report leads with four key points:

- Energy has been very good to Houston, powering economic growth for over a century.
- Oil and gas production and consumption will not disappear, even in a net-zero emissions world.
- The traditional oil and gas industry won't drive Houston's growth as they have in the past.
- Houston has an opportunity and a responsibility to lead the transition to a low-carbon energy system.

Houston is called to solve a global challenge of extreme magnitude—how to meet growing global demand for energy while at the same time dramatically lowering climate-changing greenhouse gas emissions.

There's a great deal at stake for the region. As the energy industry becomes more efficient at finding and producing oil and gas, it will continue to shed jobs. Houston has lost over 100,000 energy-related jobs in the past six years. That doesn't include the indirect jobs, those created when the oil and gas workers spend their paychecks in local stores, restaurants, spas and consumer-oriented businesses.

If the region continues to conduct business as usual, the economy will continue to contract. Houston could lose another 270,000 jobs over the next 30 years, according to estimates from McKinsey & Co. That could rise to 370,000 jobs if the world accelerates to low-carbon future, and as many as 650,000 if the world takes dramatic steps to prevent global temperatures from rising by more than 1.5 degrees Celsius. That would be prompted by a 90 percent drop in emissions, as set out in the Paris Agreement.

Houston is well positioned to lead the transition, the plan notes. The region has a large, diverse, and technically oriented workforce. It has the most highly developed of energy infrastructure in the nation. A large and expanding renewable generation capacity is already in place. The local culture supports innovation and growth. And the region's extensive port, rail and aviation systems offer a platform for large-scale decarbonization initiatives.

The strategy sets out three initial objectives:

- Jumpstarting emerging technologies and markets where Houston has a strategic advantage,
- Attracting and supporting companies in established yet rapidly growing "New Energy" industries, and
- Creating an environment that encourages investment in and deployment of a range of energy value chains.

The later includes everything from nature-based solutions, to cleaner production of natural gas, oil, and petrochemicals, to breakthroughs in energy efficiency, geothermal energy, and advanced materials.

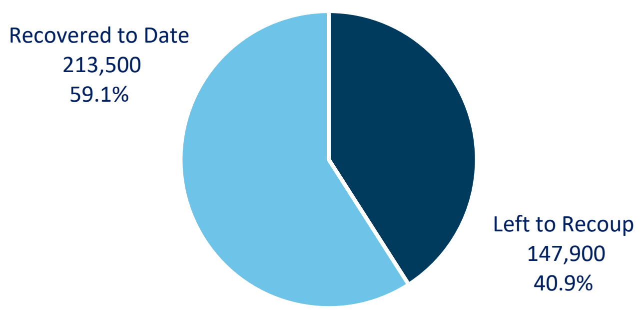
The Partnership took a deep dive into industry and economic trends to develop the plan. The organization also conducted interviews with over 60 business, government, and academic leaders. The strategy is meant to complement existing energy initiatives of the City of Houston, the Center for Houston's Future, Rice University's Baker Institute, and ExxonMobil's proposal for a $100 billion carbon capture zone along the Houston Ship Channel.

In summary, the plan builds on the best traditional 20th century energy skills and systems and paves the way for a 21st century net-zero emissions world. The full document, along with a recap of the three-day conference at which it was released, can be found at the Partnership's website. https://www.houston.org/energyconference

WHAT'S HOLDING BACK THE RECOVERY?

Metro Houston added 48,600 jobs through the first six months of this year. That brings the total recouped since the economy reopened last May to 213,500, just under 60 percent of the pandemic job losses.

EMPLOYMENT UPDATE, METRO HOUSTON, 6/21



Source: Partnership calculations, Texas Workforce Commission data.

If the economy follows historic patterns, Houston will lose jobs in July, mainly educators out of work during the summer. Job growth will resume in August and gain momentum in the fall. The last of the pandemic-related unemployment benefits are set to expire in September, which should compel workers still on the sidelines to seek employment.

Houston typically adds 30,000 to 50,000 jobs in Q3 and Q4 each year. That suggests a net gain of 80,000 to 100,000 jobs in '21. Houston would end the year 100,000 to 120,000 jobs shy of where it stood prior to the pandemic.

Though well underway, the recovery remains uneven, with some sectors recouping nearly all their lost jobs while other continue to shed workers.

Leading the Recovery

Sectors which suffered the most from social distancing mandates last March and April have benefited most from reopening. As a group, arts and recreation, health care, other services (barbershops, nail salons, dry cleaners), retailers, restaurants, and bars shed 224,800 jobs. They accounted for 62.2 percent of the region's losses. Since May '20, they've recouped 200,700 jobs, accounting for 94.0 percent of the region's gains.

Four categories still struggle: construction, energy, manufacturing, and wholesale trade. They continued to shed jobs as the economy reopened. As a group, they account for 77,500 lost jobs, or 52.4 percent of the remaining gap. COVID restrictions impacted these sectors early on, but structural and economic changes continue to stifle growth, delaying our return to pre-pandemic employment levels.

Holding Back the Recovery

Construction accounts for roughly one-fourth of the region's remaining losses. The boom in single-family construction hasn't been enough to offset the slowdown in office, industrial, retail, and multifamily construction.

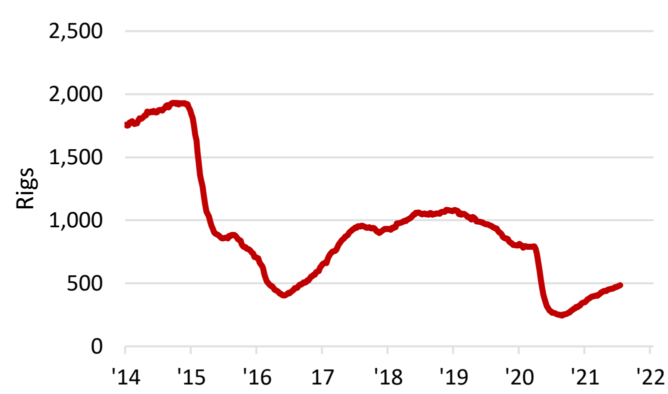
- Developers have broken ground on only 600,000 square feet office space in the past 12 months, according to Madison Marquette.
- As of early June, 14.9 million square feet (MSF) of warehouse/industrial space was under construction, reports NAI Partners. That's down from 17.9 MSF in June of last year.
- In Q1/21 1.2 MSF of retail construction was underway, down from 2.0 MSF in Q1/20, according to Colliers.
- As of mid-July, there were 15,988 multifamily units under construction, according to Apartment Data Services. That's down from 17,642 units in early February.

Energy's Not Helping

The energy industry has shed one in seven workers since February '20, some 11,600 jobs. Most of the losses in manufacturing (26,300 jobs) and wholesale trade (6,200 jobs) are tied to energy as well.

The recent surge in oil prices has not supported an increase in U.S. drilling. Roughly half of U.S. production is hedged at $45 to $50 per barrel this year. Exploration firms are using any increase in cash flow to pay down debt or pay dividends to investors and shareholders. And Wall Street remains reluctant to provide additional capital. As a result, the U.S. drilling rig count has been slow to recover, and with it Houston manufacturing jobs.

U.S. ACTIVE RIG COUNT



Source: Baker Hughes

A handful of forecasters expect the price of crude to reach $100 within the next 12 months, but that's unlikely. Saudi Arabia worries that if crude stays above $75 per barrel for long U.S. shale production will ramp back up. The Arab nation also worries that high crude will accelerate the global shift to alternative energy sources. OPEC still has 8.1 million barrels of spare capacity it could easily bring online.

The energy industry also faces challenges from policy makers, environmentalists, and activist investors. These challenges limit the industry's ability to increase production, and this has ramifications down the entire supply chain. All but a handful of the manufacturing job losses are related to the assembly of oilfield equipment and fabricated metal products (pipes, valves, flanges). Houston is unlikely to see a recovery in manufacturing jobs without a recovery in the rig count.

The Public Sector

The pandemic initially cost 10,100 government jobs, nearly all at universities, community colleges and school districts. Though students began returning to campus in the spring, job losses continued, with the sector shedding another 9,100 jobs. It's unclear whether these jobs will return when schools resume normal operations in the fall.

Jobs Gained and Lost, Pandemic and Post-Pandemic, Metro Houston

	Jobs Lost (Mar - Apr '20)		Jobs Recouped (May '20 – Jun '21)			Recovery Status
Sector/industry	Count	%	Count*	%	Gap	(See Key)
Goods Producing	***-41,600***	***-7.6***	***-29,700***	***0.0***	***71,300***	***Struggling***
Energy	-6,100	-7.8	-5,500	0.0	11,600	Struggling
Construction	-24,000	-10.1	-9,400	0.0	33,400	Struggling
Manufacturing	-11,500	-4.9	-14,800	0.0	26,300	Struggling
Durable Goods	-7,600	-5.1	-15,000	0.0	22,600	Struggling
Non-Durable Goods	-3,900	-4.6	200	5.1	3,700	Off the Bottom
Service Providing	***-319,800***	***-12.1***	***243,200***	***76.0***	***76,600***	***Significant Progress***
Trade, Transport, Utilities	-53,200	-8.5	53,700	100.9	8,900	Fully Recovered
Wholesale Trade	-8,900	-5.2	2,700	30.3	6,200	Moderate Progress
Retail Trade	-40,000	-13.3	34,600	86.5	5,400	Nearly Recovery
Transportation, Warehousing, Utilities	-4,300	-2.7	16,400	381.4	NA	Fully Recovered
Information	-4,500	-13.8	600	13.3	3,900	Off the Bottom
Financial Activities	-7,800	-4.6	2,800	35.9	6,000	Moderate Progress
Finance and Insurance	-1,400	-1.3	1,700	121.4	NA	Fully Recovered
Real Estate, Equipment Rentals	-6,400	-9.9	1,100	17.2	5,300	Off the Bottom
Professional, Business Services	-41,400	-8.0	20,800	50.2	20,600	Significant Progress
Professional, Scientific, Technical Services	-13,800	-5.6	6,800	49.3	7,000	Moderate Progress
Administrative Support and Waste Mgmt.	-25,500	-11.6	14,200	55.7	11,300	Significant Progress
Educational and Health Services	-45,700	-11.0	33,500	73.3	12,200	Significant Progress
Educational Services	-8,000	-12.1	3,700	46.3	4,300	Moderate Progress
Health Care and Social Assistance	-37,700	-10.8	29,800	79.0	7,900	Significant Progress
Leisure and Hospitality	-127,900	-38.2	119,900	93.0	8,000	Nearly Recovered
Arts, Entertainment, Recreation	-17,400	-49.0	16,700	96.0	700	Nearly Recovered
Hotels, Restaurants and Bars	-110,500	-37.0	103,200	93.4	7,300	Nearly Recovered
Other Services	-30,200	-25.4	22,000	72.8	8,200	Significant Progress
Government	-9,100	-2.1	-10,100	0.0	19,200	Struggling
State Government	-500	-0.5	-700	0.0	1,200	Struggling
Local Government	-8,800	-2.9	-9,700	0.0	18,500	Struggling
Public Education	-8,500	-4.0	-12,400	0.0	20,900	Struggling
Total	***-361,400***	***-11.3***	***213,500***	***59.1***	***147,900***	***Past Midway***

* negative value indicates job losses continued even as economy reopened

Key: struggling = no job gains; off the bottom = 0 - 20% recouped; moderate progress = 21 - 50% recouped; past midway = 50 - 60% recouped; significant progress = 61 - 80% recouped; nearly recovered = 81 - 99% recouped; fully recovered = over 100% recouped

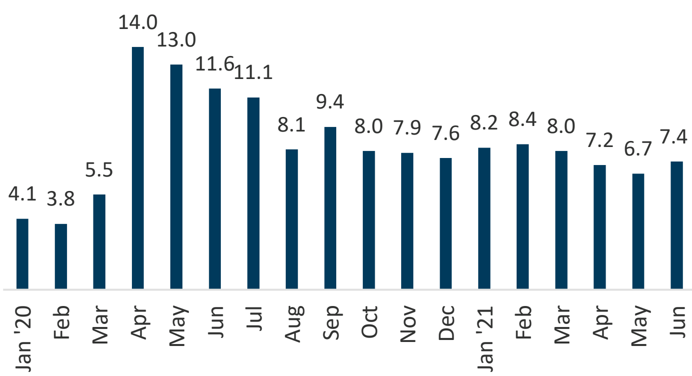
Source: Partnership calculations based on Texas Workforce Commission data

Two sectors have recouped all their losses: transport-tation/warehousing and finance/insurance. Traffic has picked up at Houston's airports and the Port of Houston. Ecommerce continues to drive the need for warehouse space and truck drivers. Finance/insurance reported the smallest job losses, so it had the least amount of ground to make up.

MEASURING THE WORKER SHORTAGE

The local unemployment rate continues to wobble, dipping one month and ticking up the next. The Texas Workforce Commission (TWC) reports that Houston's rate hit 7.4 percent in June, up from 6.7 percent in May. The rate peaked at 14.0 percent in April '20 and has trended down since. However, it will continue to wobble in the coming months.

UNEMPLOYMENT RATE, METRO HOUSTON



Source: Texas Workforce Commission

It may seem contradictory, but unemployment may rise as Houston reports job growth. There are two reasons why.

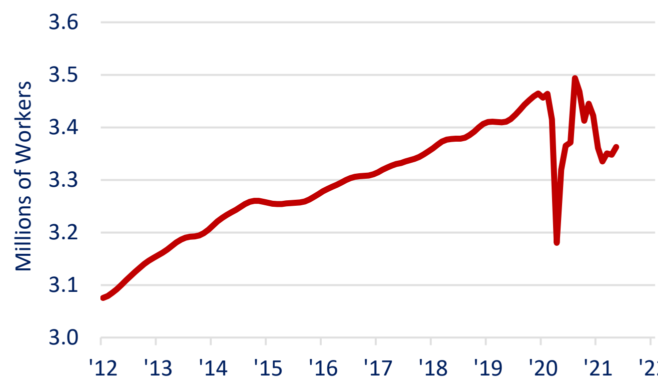
First, the data comes from different sources. Job growth is derived from Current Employment Statistics (CES), a survey of U.S. businesses conducted by Bureau of Labor Statistics. Unemployment comes from the Current Population Survey (CPS), in which the U.S. Census Bureau gathers responses from a survey of households.

Second, to be counted as unemployed an individual must be actively looking for work. Individuals who respond to the survey that they are not working nor looking for work are not part of the workforce. Therefore, they are not counted as unemployed when the rate is calculated. A common misconception is that the rate is based on how many workers are receiving unemployment benefits. The two are separate and unrelated data sets.

The methodology can result in underreporting the true level of unemployment in the region, which is what happened at the height of the pandemic.

From February '20 to April '20, Houston's labor force shrank by over 200,000 workers. These individuals stopped looking for work because they believed no jobs were available, feared exposure to the Coronavirus if they found work, or simply wanted time off. If the dropouts had been factored into the calculations, Houston's rate would have peaked nearly 5.0 points higher, or around 19.0 percent.

METRO HOUSTON WORKFORCE



Source: Texas Workforce Commission, data seasonally adjusted.

With unemployment benefits expiring, the economy heating up, and anxiety about the virus dissipating, workers are leaving the sidelines and re-entering the job market. Houston's labor force has grown by over 135,000 workers since April '20. As of June, it remained nearly 80,000 workers below pre-pandemic levels. (If they were included in the BLS calculations, Houston's unemployment rate would be close to 8.3 percent.) These workers represent a pool of untapped labor that should support job growth in the coming months.

THE SCALES HAVE FINALLY TIPPED

Houston's multifamily market has finally reached a tipping point. Trends in absorption, occupancy, rent growth and concessions signal a definite shift from a tenant-favorable to a landlord-favorable market.

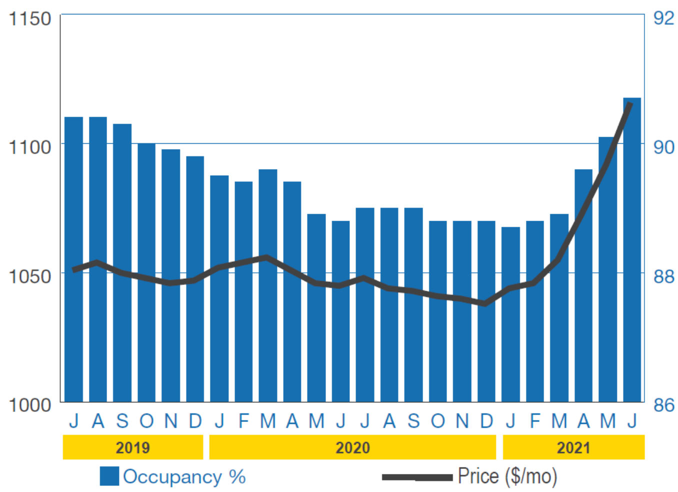
According to Apartment Data Services:

- Houston absorbed 20,265 units in the first six months of this year. That's nearly double average annual absorption (11,423 units) of the past five years.
- Overall occupancy climbed to 90.7 percent in June, the second consecutive month above 90. The rate bottomed out at 88.5 percent last year, hovered around 88.7 percent for several months, then started trending up early this year.
- Landlords are offering fewer concessions (*i.e.,* free rent, deposit waivers, floorplan upgrades). Last fall, 50 percent of all units in Houston received some form of

concession. As of July, that had dropped to 38 percent.

- As of mid-July, average Class A rent averaged $1,590 per month, up from $1,465 in March. Class B rent averaged $1,109, up from $1,032 in March. Rents had been flat or declining during much of the pandemic.

PRICE AND OCCUPANCY, HOUSTON APARTMENT MARKET



Source: Apartment Data Services

It's unclear what's driving the demand, but likely causes include inmigration from other states, young adults who moved in with their parents during the pandemic now establishing their own households, and roommates who shared an apartment during the pandemic wanting separate living arrangements.

The hottest markets (measured by change in occupancy over the past three months) are The Heights/Washington Ave., Montrose/Museum/Midtown, Woodlands/Conroe South, Katy/Cinco Ranch/Waterside, and Tomball/Spring.

According to ADS, there are 15,981 units currently under construction and another 28,015 on the drawing board.

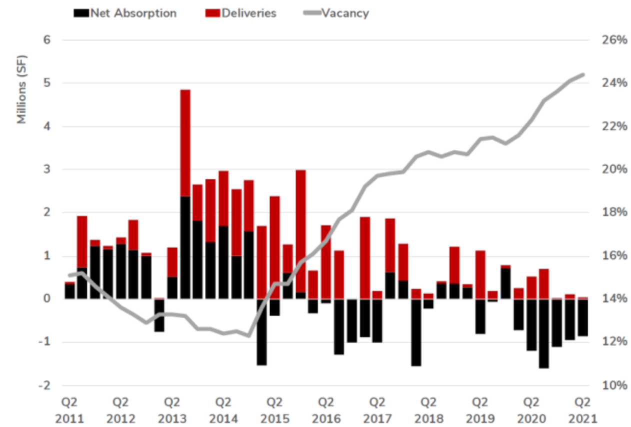
LOOKING FOR SUNLIGHT

The information that follows is consolidated from the Q2/21 Houston office market reports of CBRE, Colliers, JLL, Madison Marquette, NAI Partners and Newmark.

Office consolidations and downsizing continued in Q2. The overall vacancy rate increased, and Houston recorded another quarter of negative absorption. The market has logged negative absorption 10 out of the last 14 quarters.

Brokers across the city reported an increase in office tours and leasing activity in Q2. But office users continue to reassess their needs, redefine job descriptions, reexamine potential risks and delay lease decisions. Hybrid work environments complicate most needs assessments.

SUPPLY & DEMAND



Source: NAI Partners

Typical transactions in Q2 focused on mid- to long-term renewals. Short-term deals, frequently seen during the pandemic, were less common. The typical lease signed in Q2 was for about 18 percent less space than a comparable lease signed five years ago.

The flight to quality continued. According to JLL, Class A product built since '14 has lost fewer tenants than Class A product built prior to '14. As a group, the newer Class A buildings had a vacancy rate of 17.8 percent in Q2 compared to 29.1 percent for Class A product built prior to '14.

The second quarter saw an uptick in sublease space, but the total remains well below its '16 peak. Class A lease rates nudged up while Class B rates slipped, bringing down the overall average.

Colliers expects absorption to remain negative through the middle of next year, but the rate of negative net absorption appears to be slowing.

And as noted earlier, most of the space now under construction will deliver over the next four quarters. After that, only 668,000 square feet of office space is slated to hit the market, and that will be spread out over two to three years.

Office Construction Timeline – Space Delivered by Year			
'21	3,247,510 SF	'23	186,000 SF
'22	107,877 SF	'24	375,000 SF

Source: Colliers

The construction slowdown should help with absorption. In Q2, Houston had 41 MSF of Class A and 21 MSF of Class B space available for lease. That represents roughly one-third of all Class A space and one-fourth of all Class B space in the market.

KEY ECONOMIC INDICATORS

Aviation — The Houston Airport System (HAS) handled 3.8 million passengers in May '21, up from 508,000 passengers handled during May '20. This is the highest monthly total since February '20.

Crude Oil — The closing spot price for West Texas Intermediate (WTI), the U.S. benchmark for light, sweet crude, averaged $70.06 per barrel in June '21, up from $37.38 for the same period in '20. June marked the first month since October '18 when prices averaged above $70.

Foreign Trade — The Houston-Galveston Customs District handled 107.4 million metric tons of goods and commodities in the first four months of '21, an 11.5 percent decrease over the comparable period in '20. These shipments were valued at $74.6 billion, up 1.2 percent from '20.

Home Sales — Houston-area realtors sold 10,638 single-family homes in June '21, a new record for the month. It also represents a 13.6 percent increase from the same month last year. For the 12 months ending in June '21, realtors sold 106,701 single-family homes, up 23.7 percent from the same period in '20.

Inflation — The cost of consumer goods and services as measured by the Consumer Price Index for All Urban Consumers (CPI-U) rose 5.4 percent nationwide from June '20 to June '21. Consumer prices in metro Houston rose 4.6 percent from June '20 to June '21. The rise in inflation is the highest in the region since August '08 when prices rose 4.9 percent.

Natural Gas — In June '21, natural gas prices averaged $3.11 per million British thermal units (MMBtu), up 88.5 percent from $1.65 in June the year before.

Purchasing Managers Index — Houston's economic expansion strengthened in June, according to the most recent Houston Purchasing Managers Index (PMI). The June '21 PMI of 56.7, up from 54.2 in May, marks the 11th consecutive month above 50. Readings above 45 correlate with expansion of the ***service side*** *of Houston's* economy, below 45 a contraction, while readings above 50 signal expansion in Houston's ***goods producing sectors***, below 50 a contraction.

Rig Count — Baker Hughes reports 484 drilling rigs were working in the U.S. during the second week of July '21. That's up from 285 rigs the same week in July last year.

Sales Tax — Sales and use tax collections for the 12 most populous Houston-area cities1 totaled $992.9 million in the 12 months ending April '21, up 0.2 percent from $990.8 million for the same period a year ago. Collections for the month of April totaled $88.9 million, up 31.9 percent from $67.4 million in April '20.

Unemployment — The unemployment rate for metro Houston was 7.4 percent in June '21, up from 6.7 percent in May '21 but down from 11.6 percent in May '20. The Texas rate was 6.6 percent, up from 5.9 percent in May and 10.3 percent in June of last year. The U.S. rate was 6.1 percent, up from 5.5 percent in March but down from 11.2 percent last June. The rates are not seasonally adjusted.

Vehicle Sales — Houston-area auto dealers sold 23,123 new vehicles in June '21, an increase of 77.5 percent from June '20, according to TexAuto Facts, published by InfoNation, Inc. of Houston. Truck/SUV sales jumped 70.7 percent since June '20 and car sales surged 102.0 percent.

STAY UP-TO-DATE

For past issues of **Economy at a Glance**, click here.

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The Key Economic Indicators table is **updated whenever any data change** — typically, six or so times per month. If you would like to receive these updates by e-mail, usually accompanied by commentary, click here.

Elizabeth Balderrama, Heath Duran, Annaissa Flores, Patrick Jankowski, Roel Martinez and Josh Pherigo contributed to this issue of Houston, The Economy at a Glance.

HOUSTON MSA NONFARM PAYROLL EMPLOYMENT (000)

	June '21	May '21	June '20	Change from May '21	Change from June '20	% Change from May '21	% Change from June '20
Total Nonfarm Payroll Jobs	**3,044.3**	**3,037.8**	**2,942.9**	**6.5**	**101.4**	**0.2**	**3.4**
Total Private	***2,635.1***	***2,620.6***	***2,534.5***	***14.5***	***100.6***	***0.6***	***4.0***
Goods Producing	***479.0***	***483.0***	***498.5***	***-4.0***	***-19.5***	***-0.8***	***-3.9***
Service Providing	***2,565.3***	***2,554.8***	***2,444.4***	***10.5***	***120.9***	***0.4***	***4.9***
Private Service Providing	***2,156.1***	***2,137.6***	***2,036.0***	***18.5***	***120.1***	***0.9***	***5.9***
Mining and Logging	66.8	69.9	65.2	-3.1	1.6	-4.4	2.5
Oil & Gas Extraction	33.1	34.6	34.2	-1.5	-1.1	-4.3	-3.2
Support Activities for Mining	31.8	33.4	29.6	-1.6	2.2	-4.8	7.4
Construction	204.0	206.1	215.1	-2.1	-11.1	-1.0	-5.2
Manufacturing	208.2	207.0	218.2	1.2	-10.0	0.6	-4.6
Durable Goods Manufacturing	127.2	126.1	136.4	1.1	-9.2	0.9	-6.7
Nondurable Goods Manufacturing	81.0	80.9	81.8	0.1	-0.8	0.1	-1.0
Wholesale Trade	164.6	164.6	161.0	0.0	3.6	0.0	2.2
Retail Trade	295.7	294.1	284.6	1.6	11.1	0.5	3.9
Transportation, Warehousing and Utilities	169.1	167.7	154.2	1.4	14.9	0.8	9.7
Utilities	17.3	17.2	17.0	0.1	0.3	0.6	1.8
Air Transportation	18.4	18.5	19.4	-0.1	-1.0	-0.5	-5.2
Truck Transportation	27.0	26.9	26.2	0.1	0.8	0.4	3.1
Pipeline Transportation	11.4	11.4	12.3	0.0	-0.9	0.0	-7.3
Information	28.8	28.6	28.5	0.2	0.3	0.7	1.1
Telecommunications	12.5	12.6	12.9	-0.1	-0.4	-0.8	-3.1
Finance & Insurance	105.0	104.9	103.8	0.1	1.2	0.1	1.2
Real Estate & Rental and Leasing	59.2	59.1	59.1	0.1	0.1	0.2	0.2
Professional & Business Services	494.1	493.1	478.8	1.0	15.3	0.2	3.2
Professional, Scientific & Technical Services	240.5	238.6	232.9	1.9	7.6	0.8	3.3
Legal Services	*28.6*	*28.1*	*28.0*	*0.5*	*0.6*	*1.8*	*2.1*
Accounting, Tax Preparation, Bookkeeping	*23.9*	*23.9*	*24.1*	*0.0*	*-0.2*	*0.0*	*-0.8*
Architectural, Engineering & Related Services	*67.1*	*66.5*	*68.7*	*0.6*	*-1.6*	*0.9*	*-2.3*
Computer Systems Design & Related Services	*36.0*	*34.9*	*33.1*	*1.1*	*2.9*	*3.2*	*8.8*
Admin & Support/Waste Mgt & Remediation	208.1	209.5	201.0	-1.4	7.1	-0.7	3.5
Administrative & Support Services	*195.0*	*196.4*	*189.4*	*-1.4*	*5.6*	*-0.7*	*3.0*
Employment Services	*72.9*	*73.0*	*66.5*	*-0.1*	*6.4*	*-0.1*	*9.6*
Educational Services	61.8	63.9	58.9	-2.1	2.9	-3.3	4.9
Health Care & Social Assistance	340.4	337.6	331.0	2.8	9.4	0.8	2.8
Arts, Entertainment & Recreation	34.8	31.3	28.7	3.5	6.1	11.2	21.3
Accommodation & Food Services	291.7	281.5	246.2	10.2	45.5	3.6	18.5
Other Services	110.9	111.2	101.2	-0.3	9.7	-0.3	9.6
Government	409.2	417.2	408.4	-8.0	0.8	-1.9	0.2
Federal Government	30.8	30.7	30.7	0.1	0.1	0.3	0.3
State Government	91.2	91.8	91.9	-0.6	-0.7	-0.7	-0.8
State Government Educational Services	*52.6*	*53.3*	*52.5*	*-0.7*	*0.1*	*-1.3*	*0.2*
Local Government	287.2	294.7	285.8	-7.5	1.4	-2.5	0.5
Local Government Educational Services	*192.4*	*198.6*	*194.1*	*-6.2*	*-1.7*	*-3.1*	*-0.9*

SOURCE: Texas Workforce Commission