

A wide-angle photograph of the Houston skyline at sunset. The sky transitions from a deep blue at the top to a warm orange and pink near the horizon. Numerous skyscrapers of varying heights and architectural styles are visible, some with lights already on. In the foreground, there are green trees and a road with a few cars. A large, semi-transparent blue triangle is overlaid on the right side of the image, containing the text 'Houston Metro Overview'.

HOUSTON 2023

Houston Metro Overview

HOUSTON quick facts

Often referred to as the "Energy Capital of the World", the city of Houston, Texas is the anchor city and Harris County is the seat, of the Houston-The Woodlands-Sugarland, TX, Metropolitan Statistical Area (MSA). The fifth-largest MSA in the nation, Greater Houston is home to more than 4,800 energy-related establishments ranging from exploration and production firms to manufacturers and wholesales of energy-sector products.

Houston's economy continues to diversify each passing year. An estimated \$3 billion in construction activity at the Texas Medical Center is strengthening the area's reputation as one of the top medical destinations in the world. Advancements in the aerospace industry and continued missions facilitated by the Lyndon B. Johnson Space Center distinguish Houston as an innovation core with a wealth of resources that make an ideal business location. Houston is luring more residents from around the globe drawn by its mix of cultural amenities, world-class restaurants, diverse communities and a low cost of living compared to other tier-one markets. Aided by the absence of city or state income tax, Houston's cost of living is far below the national average.

■ 3.3 Million

Houston MSA Jobs

■ 1.3%

Houston Projected Population Growth

■ 35.30

Houston Median Age

Houston
\$119,000
Average Income

- Houston is the nation's **4th** most populous city
- At **665 square miles**, the City of Houston is larger in area than the cities of Chicago, Dallas, Los Angeles, New York, Phoenix and San Diego.
- Houston ranks **3rd** in the U.S. for manufacturing GDP and has the highest industry GDP within the city
- More than 500 institutions are devoted to the performing and visual arts, science and history in the Houston area.
- The 9-county Houston MSA had a population of **7,206,841** residents as of July, 2021, according to estimates by the U.S. Census Bureau
- If metro Houston were a state, it would have the 15th largest population in the U.S. behind Arizona, and ahead of Massachusetts and Tennessee.

HOUSTON quick facts

4th
Largest
U.S. City

1.1 Million
New Residents in
Last Decade

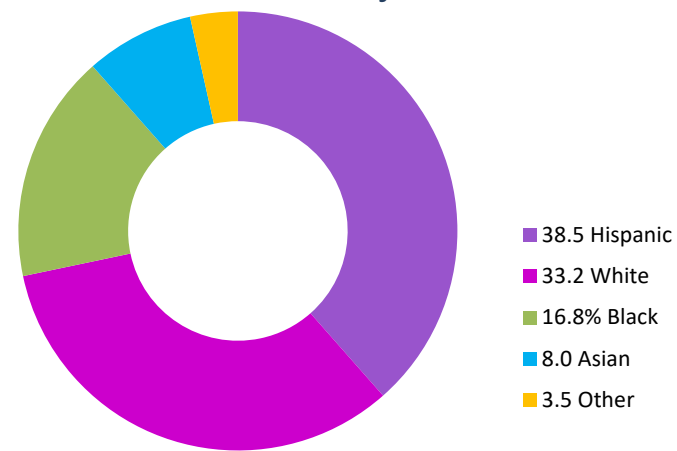
\$490
Billion
Regional GDP

350,000
Educated
Millennials

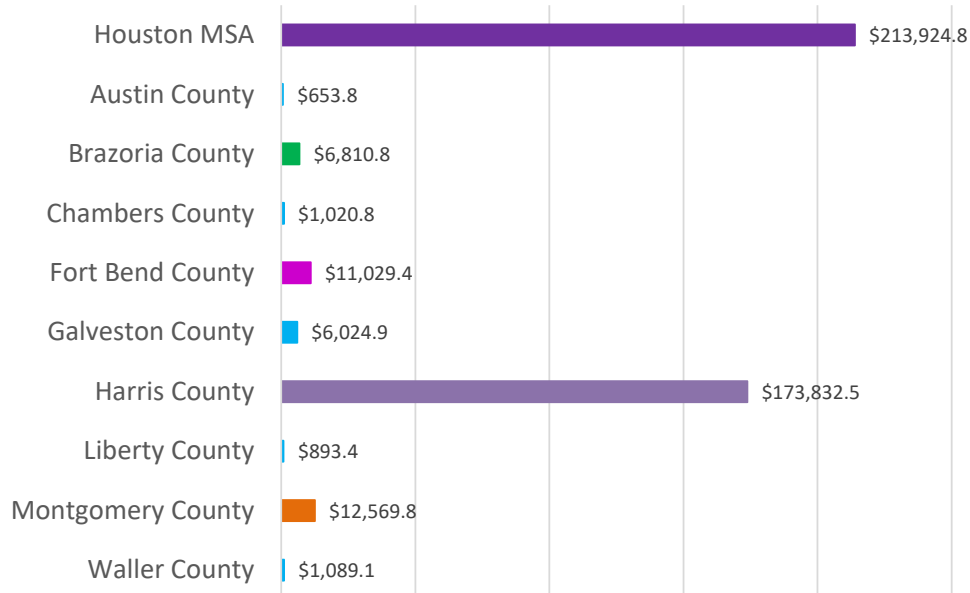
760+
Expansion and Relocation
Projects in Last 2 Years

Houston
2.3
million residents

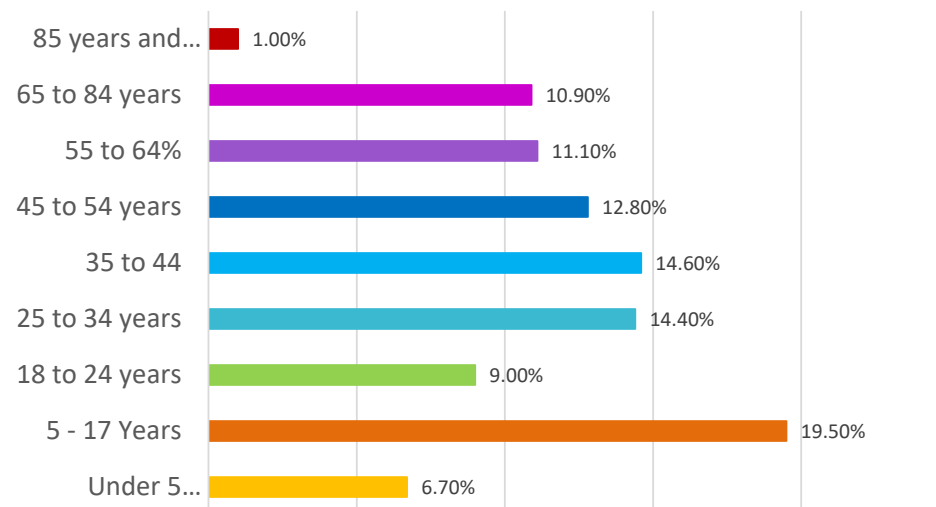
MSA
7.2
million residents



Total Wages (Metro Houston, (\$ Millions) All Workers)

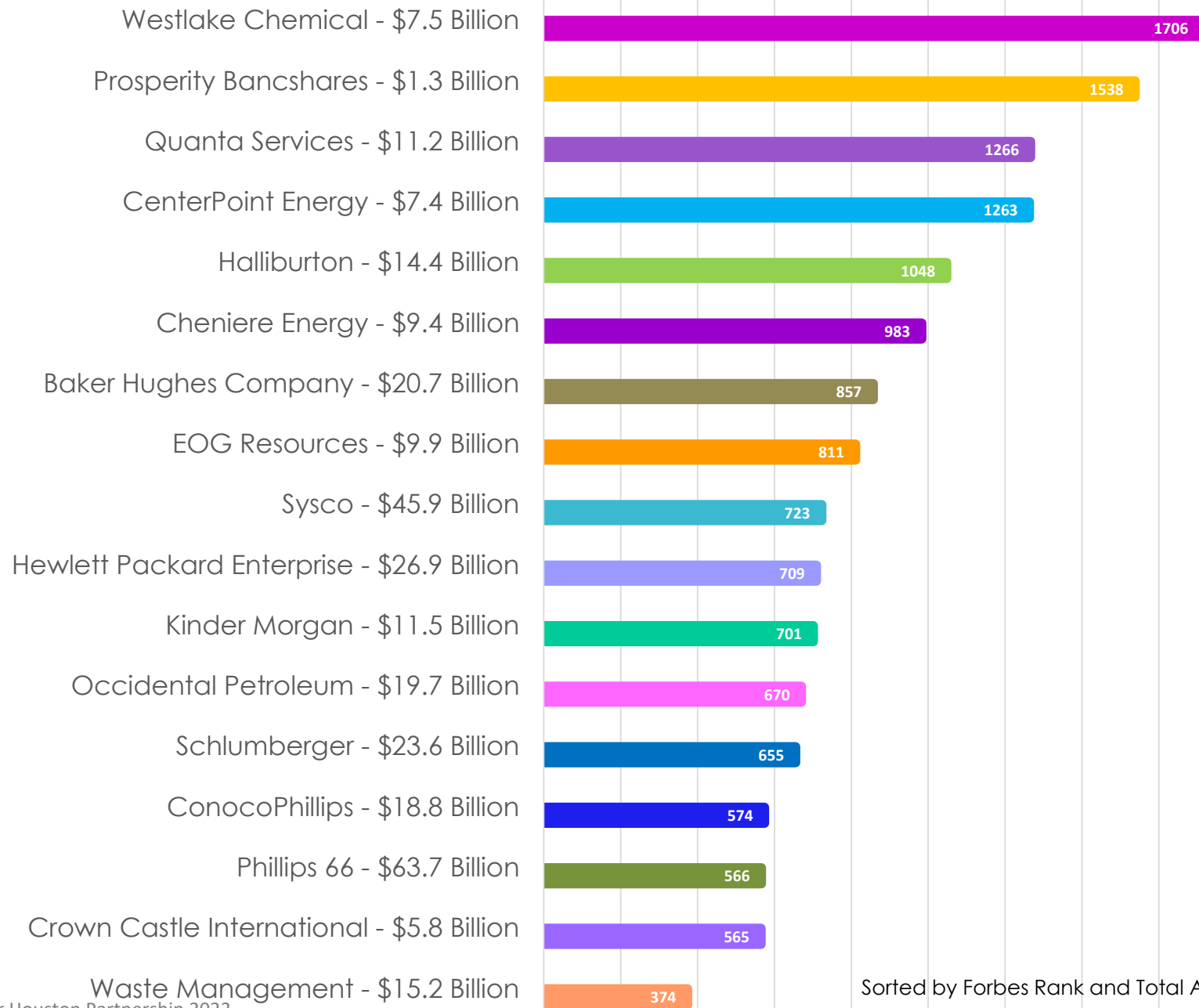


Age Distribution



HOUSTON quick facts

Houston is Home to 18 *Forbes* Global 2000 Headquarters



Sorted by Forbes Rank and Total Annual Revenue

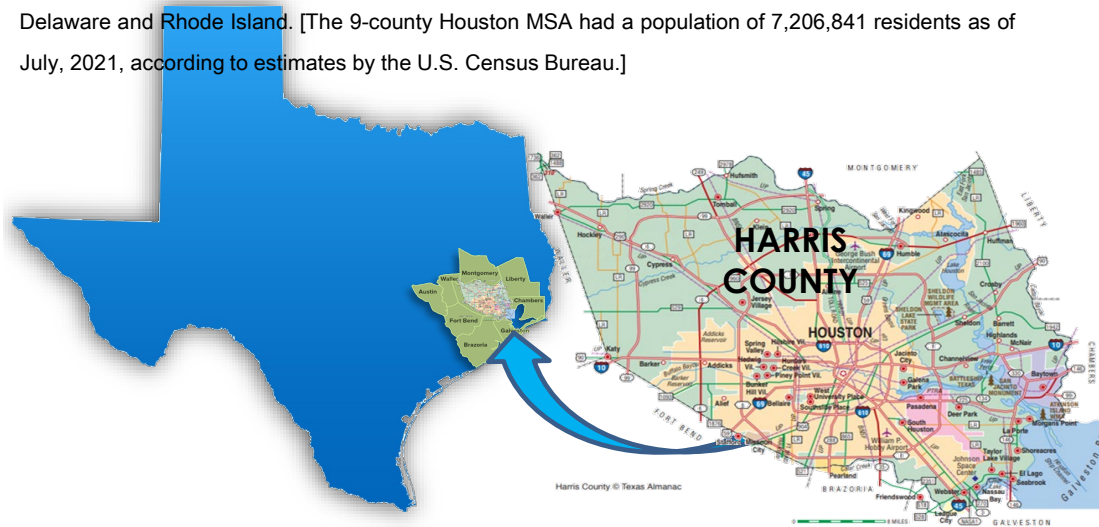
HOUSTON MSA

The Houston - The Woodlands - Sugar Land Metropolitan Statistical Area (MSA)

contains nine Texas counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller. Within these nine counties are 124 incorporated cities and 33 Census Designated Places (CDP).

The county seat or administrative center of Harris County is the City of Houston. Harris County contains the bulk of the cities population in addition to all or part of 33 incorporated cities and 12 CDPs. Small portions of Houston spread into adjacent Montgomery and Fort Bend counties.

The nine-county Houston-The Woodlands-Sugar Land MSA covers 9,444 square miles, is the nation's 5th largest metro area. An area larger than five states: New Hampshire, New Jersey, Connecticut, Delaware and Rhode Island. [The 9-county Houston MSA had a population of 7,206,841 residents as of July, 2021, according to estimates by the U.S. Census Bureau.]



9,444

square miles

HOUSTON
MSA

1,778

square miles

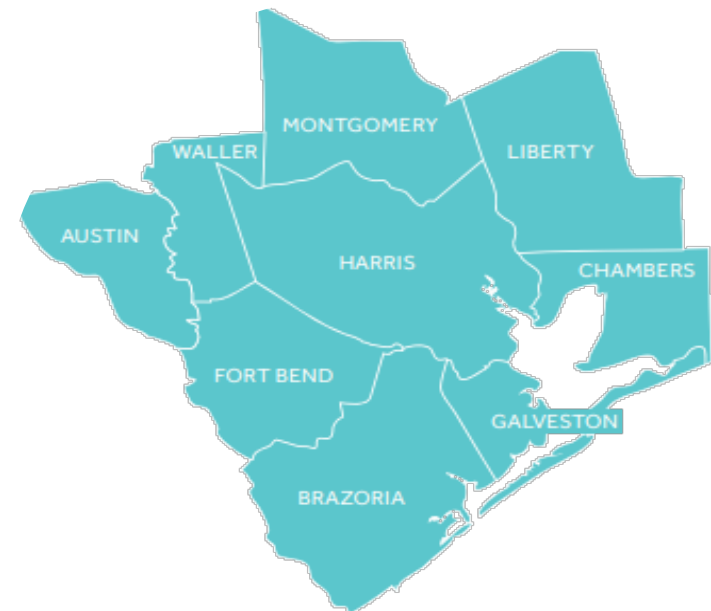
HARRIS
COUNTY

655

square miles

HOUSTON

- Harris County is the largest of the 12 counties in the Greater Houston region. Almost three-quarters of the county are covered by the city of Houston and thirty smaller communities; only about 27 percent of the county is rural. The county comprises 1,778 square miles and is the largest Texas county east of the Nueces River. Harris County transportation systems serve intrastate and interstate needs with six major railroads hauling freight to distribution centers and to the port; Amtrak provides passenger rail service while METRO provides light rail and passenger bus service. Buses, trucks and passenger cars utilize a network of highways including Interstate 10 east and west and Interstate 45 north and south. U.S. Highway 59/I-69 crosses the county from northeast to southwest and goes to the Rio Grande valley, and U.S. 290 leads to West Texas via Austin. Loop 610 encircles the heart of Houston, a second loop, Beltway 8, allows traffic to move around the perimeter of the urban sector. A third loop, SH 99, the Grand Parkway, is a 180+ mile circumferential scenic highway which, when completed, will be the longest highway loop in the United States, traversing seven counties and encircling the Greater Houston region.
- Two major airports, George Bush Intercontinental and William P. Hobby, are within the city of Houston. Leading sectors include health care, trade, service and education.



Houston Economic Drivers



HEALTH CARE



- 106,000+ Jobs Supported at TMC
- \$25 billion TMC Annual GDP Generated
- Largest Medical Complex in the World
- \$3 billion worth of construction projects underway

The Medical Center (TMC), the largest medical complex in the world, encompasses 55 institutions ranging from renowned hospitals, support organizations, academic and research institutions, and public health organizations. Comprising 1,345 acres, TMC is the eight-largest business district in the United States and is home to the world's largest cancer hospital and children's hospital. TMC's campus currently contains 50 million square feet of developed space, with an additional \$3 billion worth of construction projects underway.

Bio-Tech and Life Science

Houston's health care industry includes 158,690 health care practitioners and technical occupations, including 12,190 medical doctors and 61,100 nurses. As a hub for medical device manufacturing, pharmaceuticals, and health research, the Houston region is home to more than 18,960 life science and biotech researchers. More than 1,860 clinical trials were active in the Houston region in '20, representing 19.9 percent of all trials in the U.S. In '20, Houston medical institutions and life science firms received \$833.9 million in National Institutes of Health (NIH) grant funding, up 16.3 percent from '19. In the last five years, the region received nearly \$3.5 billion in NIH funding, an average of \$690.8 million per year. **The Texas Medical Center's** Innovation Institute is the epicenter of Houston's life science startup activity. The organization aims to help early stage companies commercialize new medical technologies by providing access to the vast resources of the world's largest medical center. The Innovation Institute's accelerator program, TMCx, focuses on early-stage companies making breakthroughs in medical devices, digital health care services, diagnostics and therapeutics.

ENERGY

Petrochemical & Refining

The Spaghetti Bowl is a complex of several thousand miles of product pipeline connecting hundreds of chemical plants, refineries, salt domes and fractionation plants along the Texas Gulf Coast. It gives the Houston area an economic advantage through convenient and low-cost transfer of feedstocks, fuel and chemical products among plants, storage terminals and transportation facilities. In '20, the Houston metro had a crude operating capacity of 2.7 million barrels of refined petroleum products per calendar day representing 14.0 percent of overall U.S. capacity, according to the U.S. Energy Information Administration. Oil refiners in the region employed 8,079 in '20, equivalent to 3.6 percent of the Houston region's total manufacturing workforce.

- 4,600+ Energy Related Companies
- \$3.7 billion Clean Energy Venture Capital



- 237,000+ Combined Employed

Houston Energy Corridor

Dubbed the "Energy Capital of the World," Houston has more energy industry employees than any other U.S. metro, employing nearly a third of the nation's gas and oil workforce. Houston is home to 4,600 energy-related firms and is in the midst of a petrochemical construction boom with \$50 billion in projects either underway or recently completed. The high concentration of energy expertise offers the region a competitive advantage for the future of renewable energy, in which over \$3.7 billion in venture capital has been invested into area companies since 2010.

New Energy

Houston is well positioned to lead the transition to low-carbon and no-carbon energy. Houston 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 infrastructure offer a platform for large-scale decarbonization initiatives. The strategy sets out three initial objectives for the region: 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 wide range of 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.

AEROSPACE & AVIATION



JOHNSON SPACE CENTER

Years before the historic Apollo 11 mission in 1969, Houston was a pioneering hub in the aerospace and aviation sector. But the mission didn't stop at the moon. Over the decades, Houston scientists and engineers have helped with some of the world's biggest space endeavors, including running mission control for the International Space Station for nearly 20 years. Some of the sharpest minds in aerospace and aviation technology continue to chart a vibrant future for Houston centered around NASA's Johnson Space Center and one of the world's only truly urban commercial spaceports. Every manned U.S. space mission since 1961 has been planned and executed from JSC. Every astronaut has lived and trained in the Houston area, every manned mission controlled here. The missions of tomorrow—to the moon, to Mars and beyond—are being planned today by scientists and engineers who call Houston home.

- 500+ Space, Aviation, and Aerospace Related Firms and Institutions

ELLINGTON FIELD, located 18 miles southeast of downtown Houston, **became a Federal Aviation Administration (FAA) designated spaceport** in '15. In '20, Phase 1 construction of the spaceport development was underway, an \$18.8 million project designed to provide infrastructure and utilities. One of only 10 spaceports in the U.S., the project is intended to help attract the relocation of aerospace companies. Axiom Space, the world's first commercial space station builder, announced in '20 that it will build a 14- acre headquarters campus at Ellington Field to train private astronauts and establish a private space station. The company also leased office space in the Clear Lake area near JSC.

- \$2.9 billion Total Trade in Aviation
- 2 International Airports
- 1 FAA-Licensed Commercial Spaceport

110+
Active astronauts and
astronauts in training

11,000+
JSC employees
\$5.56
annual budget

TRANSPORTATION

AIRPORTS

The Houston Airport System ranks as one of the largest multi-airport systems in North America. The system is comprised of George Bush Intercontinental Airport (IAH), William P. Hobby Airport (HOU) and Ellington Airport (EFD). Scheduled and charter passenger carriers fly directly to approximately 180+ domestic and international destinations from Houston. Houston is the international air gateway to the southern United States and Latin America. In '15, Hobby Airport added direct flights to Mexico, making Houston the only city in Texas with two international airports – one of only eight such cities nationwide.

According to J.D. Power's '20 Airport Satisfaction rankings, George Bush Intercontinental (IAH) ranked 13th among "mega airports" in the U.S. and William P. Hobby Airport (HOU) ranked 4th among "large" airports in the US.

PORT OF HOUSTON/FOREIGN TRADE

The Port of Houston consistently ranks No. 1 in foreign trade tonnage among all seaports nationwide. According to the U.S. Army Corps of Engineers (USACE), Houston handled more than 275 million short tons of cargo in 2020, about 50 million tons more than any other U.S. port. Foreign trade in '20 totaled 180.5 million metric tons valued at \$126.5 billion. Imports totaled 47.9 million metric tons, valued at \$52.5 billion. Exports totaled 132.6 million metric tons, valued at \$74.0 billion. The Port of Houston traded with 212 countries in '20. Of those, trade with 32 countries exceeded one billion dollars each while trade with 152 additional countries exceeded one million dollars. The Port's top trading partner by value is China and by weight is Mexico.

#1 Port of Houston Consistently Ranks No. 1 in foreign trade tonnage among all seaports nationwide



TRANSPORTATION continued

HIGHWAYS

Houston's extensive highway system is well integrated with the Port of Houston, Houston Intercontinental Airport (IAH), Hobby Airport, Ellington Airport, and the mainline railroads serving the city. Houston is at the crossroads of Interstate Highways 10, 45 and 69. When connections are complete, I-69 will link Canada, the U.S. industrial Midwest, Texas and Mexico.

There are 3,355 centerline miles and 11,084 lane miles of freeways and expressways in operation, according to the Texas Department of Transportation (TxDOT) Houston District. The Houston District includes Brazoria, Fort Bend, Galveston, Harris, Montgomery, and Waller Counties. Corridors: Houston's major thoroughfares include Beltway 8, Fort Bend Tollway, Grand Parkway 99, Hardy Tollway, I-10, I-45, I-610, SH 6, SH 146, SH 225, SH 288, US 59/I-69, US 90, US 290 and the Westpark Tollway.

MOTOR FREIGHT LINES

The region's extensive highway system is well-integrated with the Houston Airport System, four deep water seaports and the mainline railroads serving the city. Houston is at the crossroads of Interstate Highways 10, 45 and 69. I-69 is known as the "NAFTA superhighway" that will link Canada, the U.S. industrial Midwest, Texas and Mexico once complete. 1,469 long-distance trucking establishments operate in the Houston MSA.

RAILROADS

The Houston area is served by BNSF Railway Company, Kansas City Southern Railway Company and Union Pacific Railroad Company. Businesses along the Houston ship channel are served by the Galveston Railroad, Port Terminal Railroad Association and Texas City Terminal Railway Company. Eight mainline tracks and five branch line tracks radiate from Houston.

Amtrak provides passenger service three times per week in Houston via the Sunset Limited route that travels from New Orleans to San Antonio and Los Angeles.

CONSTRUCTION

The construction industry in Houston employed an average of 224,344 people in the four quarters ending Q3/20, according to the Texas Workforce Commission. Nearly half of all construction employment occurred as specialty trade contractors (e.g., electrical work, plumbing, site preparation, painting). The remaining types of construction employment, building construction and heavy and civil engineering construction accounted for 23.0 percent and 28.5 percent of construction employment, respectively. Annual wages in the industry averaged \$76,947. The Houston metro area was home to nearly 11,696 construction establishments in the four quarters ending Q3/20. Of that total, 60.4 percent were specialty trade contractors, 29.6 percent were in building construction, and 10.0 percent were heavy and civil engineering construction establishments.

City of Houston building permits totaled nearly \$6.5 billion in '20 with nearly \$2.8 billion for residential and nearly \$3.8 billion for commercial building permits, according to city data.

ADVANCED MANUFACTURING

ADVANCED MANUFACTURING

The 6,723 manufacturing establishments in the Houston region employed 223,706, or about 1 in 13 Houston-area workers in '20, according to the Texas Workforce Commission. The average annual wage was \$88,574. The value of goods manufactured in metro Houston topped \$86.0 billion in '19 and accounted for 16.8 percent of the region's total GDP, according to the Bureau of Economic Analysis.

CORPORATE HEADQUARTERS

One of the best business climates in the nation has helped the Houston area become a top destination for corporate offices. Boasting over 50 million square feet of Class A office space, Houston ranks among the top five metros nationally for ranked corporate headquarters, with 23 Global 2000 and 65 Fortune 1000 companies, including more than 20 Fortune 500 companies. Of the 128 publicly traded oil and gas companies, 44 have offices located in the Houston area.



- 50 million SF of Class A Office Space
- 65 Fortune 500 & 1000 Companies
- 23 Forbes Global 2000 Companies

HIGHER EDUCATION

The Houston region has more than 40 two-year community colleges and four-year universities, including three Tier 1 universities: Rice University, University of Houston and the nearby Texas A&M University in College Station. Houston-area colleges and universities educate nearly 430,000 students and graduate more than 100,000 students annually.

The region also has 50 trade, vocational and business schools specializing in law, healthcare, welding, process technology and various other disciplines that enroll an additional 20,000 students, according to the National Center for Education Statistics. Click below to see local colleges and universities ranked by U.S. News & World Report.

University & Rank in National Universities

Rice University	#15
Art Institute of Houston	#35
Houston Christian University	#64
University of Houston Downtown	#78
University of Houston	#182
University of St. Thomas	#250
Texas Southern University	#331



RECREATION & ENTERTAINMENT

- Houston's downtown is home to a number of clubs, musical entertainment venues, and three of Houston's four professional sports franchises: Major League Baseball's Houston Astros, who play at Minute Maid Park, Major League Soccer's Houston Dynamo, who play at BBVA Compass Stadium, and National Basketball Association's Houston Rockets, who play 41 regular-season home games per year at the Toyota Center.
- South Houston is home to NRG Park, a 350 acre entertainment complex comprising the Houston Texans' 67,925 seat NRG Stadium; the Astrodome; NRG Arena; and the NRG Center. NRG Park serves as the primary entertainment center for a number of Houston's large events, including the Houston Livestock and Rodeo Show and two Super Bowls.
- Situated between Downtown Houston and NRG Park, adjacent to the Texas Medical Center, Houston's Museum District is one of the most walkable areas in Houston. The 19 museums, galleries, cultural centers, and community organizations in the district help showcase art, history, and culture from around the world.
- One of the 10 largest malls in the country, The Galleria is a mixed-use shopping center featuring 2.4 million square feet of retail space and over 375 retail establishments. The Galleria is ranked as one of the world's best shopping malls by Forbes and is the most visited attraction in metro Houston with over 35 million annual visitors.



THE ECONOMY

Houston Economic Overview 2023

[Slower global growth will impact Houston's economy but won't lead to a local recession]



The International Monetary Fund (IMF) projects global growth to average 2.6 percent this year, down 0.6 percent points from '22. That's an improvement over projections made in the fall when the IMF forecast a tepid 2.2 percent this year. Slower global growth will impact Houston's economy but won't lead to a local recession.

U.S. economic growth has slowed considerably since January but the recession that so many predicted hasn't arrived yet. It's unlikely to knock on our doors before autumn, if at all. When it does, and if the recession is short and shallow, the impact on Houston will be minimal. Only if the U.S. slides into a deep and protracted downturn would Houston suffer.

Source: Greater Houston Partnership Economy at a Glance May 2023

Houston Economic Overview

• Metro Houston Created 19,900 Jobs in March 2023

Despite the headlines, the economics community isn't unified in the belief that a recession is imminent. In March, the Nation Association for Business Economics (NABE) asked its members about the likelihood of a recession in the next 12 months. Forty-nine percent placed the probability at less than 50 percent. Only 44 percent of the respondents place the probability at 50 percent or more. In its most recent survey, The Wall Street Journal found one-fourth of their respondents placed the probability of a recession in the next 12 months at less than 50 percent.

But the U.S. has not slipped into a recession. Most of the indicators that the National Bureau for Economic Research (NBER) tracks to determine the peaks and troughs of the business cycle show the economy still expanding.

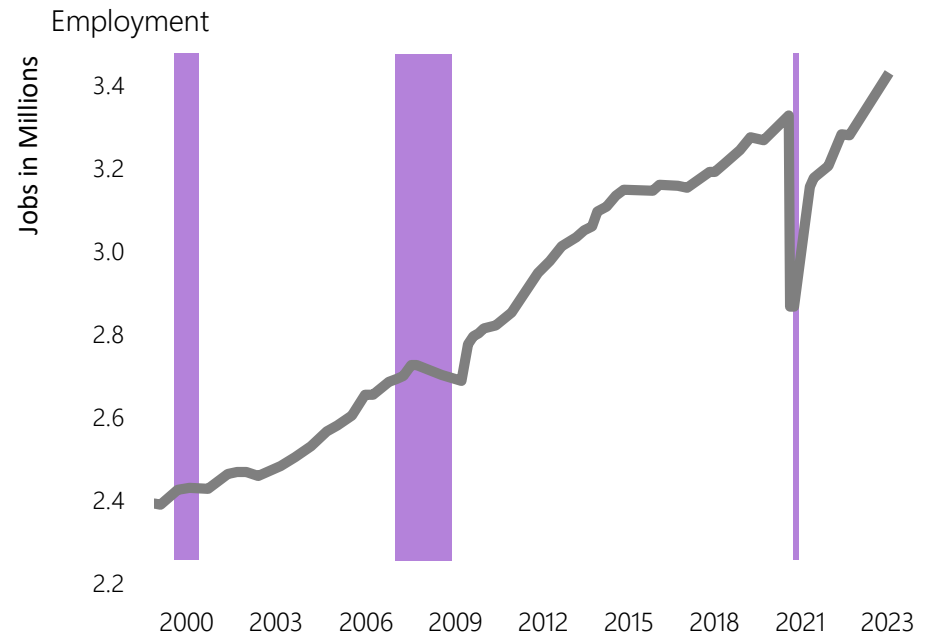
- The nation created jobs, 236,000 in March 2023 and 1.0 million since the first of the year, according to the BLS.
- A different employment indicator, one based on a survey of households, shows the nation added 577,000 jobs in March 2023.
- Though industrial production began to slide in September 2022, a slow recovery began in January and continued into March 2023.
- Personal income continues to grow, even after adjusting for inflation, though growth has tapered in recent months.
- Personal consumption expenditures are holding steady.
- Only manufacturing and wholesale show signs of weakness in the data NBER tracks.

Eventually, the U.S. will slip into a recession. Contractions are a normal part of the business cycle, just as sunshine and rain are normal for Houston's weather. Although the outlook for the economy remains cloudy, the Partnership sees no rain in Houston in the near-term forecast.

According to the Texas Workforce Commission (TWC) Metro Houston created 19,900 jobs in March 2023. That's in line with the twenty-year average of 20,600 for the month, which suggests that after the record pace of the past two years, Houston's job growth has returned to normal. Job gains were broad-based with only a handful of sectors reporting job losses.

HOUSTON OUTLOOK

- Downturns in industries that are most susceptible to rising interest rates will be offset by the overall job growth across all sectors.
- Crude shortages and high prices, particularly in Europe due to imposed sanctions on Russia, will stimulate investment in Houston's energy sector. Increased demand will also be seen in the chemical and plastics manufacturing sectors.
- The health care industry will remain strong regardless of potential recession depth and duration, and between 6,100 to 9,100 jobs will be added in 2023.
- The latest Greater Houston Partnership Research forecast predicts growth resuming in 2023 3Q and ending with a net gain of 60,800 jobs. The long-term average job gain for the region is 65,000 to 70,000 jobs per year.



Houston Multifamily Recap

- Rent growth decelerated in the last few months of 2022 with year-over-year rent growth of 2.8%, down from its peak of 9.4% in the fourth quarter of 2021.
- The slowing of rent gains is projected to continue as the market adjusts to its typical 2% growth during the five years before the pandemic, according to CoStar.
- Supply outpaced demand over the last few quarters, causing an uptick in vacancy rates.
- Entry-level home purchases have been substantially thwarted due lack of inventory, increased home values, and escalating monthly mortgage payments as a result of higher interest rates. Some existing renters will remain in the apartment market until additional supply comes online. **Steady in-migration and household growth will help sustain apartment demand in the long term.**

\$169,066

Avg Sold Price/Unit

5.9% Avg Cap Rate



+2.8%

New lease asking rents are at \$1,300, up 2.8% from the previous year

- Houston's **surging** population and economic growth have triggered a flurry of construction, particularly in the multifamily market. **Houston ranked among the top three metros in the U.S. for new supply growth over the past 10 years**, adding roughly 150,000 units and driving up its inventory by 30%.
- Deliveries moderated with 13,740 units delivered through October 2022 versus 18,507 units delivered during the same period in 2021.
- Supply at the end of 2022 accounted for 2.0% of total stock, 30 basis points above the national rate.
- Approximately 29,300 units were under construction as of October 2022, and additional 61,000 units were in the planning and permitting stages. Close to 14,000 started construction in 2022. 4,245 units more than during the same period in 2021.

Source: Apartment Data.com from MRI Software - June 2023

Occupancy



89.9%

June 2023

89.8%

10 Yr Avg

T12 Rent Trends



1.3% ↗

June 2023

4.26% ↗

10 Yr Avg

T12 Absorption



3.85K

June 2023

13.54K

10 Yr Avg

T12 Completions



12.01K

June 2023

15.08K

10 Yr Avg

JUNE 2023 MARKET SNAPSHOT

Rental Growth Rate	1.37%
# of Operating Units	729,749
Size (sf)	891
Price (\$/mo)	\$1,272
Rental Rate (\$/sf/mo)	\$1.43
Occupancy (%)	89.9%
Units Opened (Past 12 months)	18,019
Units Under Construction	22,208
Proposed Units	31,719
Units Absorbed (Past 12 months)	3,861

Houston is the seventh-largest economy in the U.S. and has one of the youngest, most diverse, and fastest-growing populations in the world. Houston has a robust and diversified economy with a broad base in the industries of energy, business, technology, international trade, manufacturing, aeronautics, transportation, education, medicine, and research. The metro area should have the strongest growth in the construction, energy, government, health care, professional, services, and restaurant sectors in the first half of 2023. Downturns in industries that are most susceptible to rising interest rates will be offset by the overall job growth across all sectors.

Houston has the 5th largest apartment stock in the U.S., according to NMHC. Occupancies and rents are strong, deliveries are low, and demand drivers are healthy. Absorption rates were impacted nationally by an erosion in consumer confidence and lack of new household formation in an uncertain economic environment. The city is poised for a 'return to mean' performance in 2023, and there is potential for a better scenario due to growth in the life sciences, global trade, and energy sectors of the local economy.