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APPLICATION OF CENTERPOINT	§	PUBLIC UTILITY COMMISSION
ENERGY HOUSTON ELECTRIC, LLC	§	
FOR AUTHORITY TO CHANGE RATES	§	OF TEXAS

DIRECT TESTIMONY

OF

LYNNAE K. WILSON

ON BEHALF OF

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

MARCH 2024

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GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym	Definition
ADMS	Advanced distribution management system
Application	CenterPoint Houston's application and statement of intent
CAMT	Corporate Alternative Minimum Tax
CenterPoint Houston or Company	CenterPoint Energy Houston Electric, LLC
CNP	CenterPoint Energy, Inc.
Commission	Public Utility Commission of Texas
EEI	Edison Electric Institute
EMP	Electromagnetic Pulse
ERCOT	Electric Reliability Council of Texas
Foundation	CenterPoint Energy Foundation
IRA	Inflation Reduction Act of 2022
kV	Kilovolts
MUG	Major Underground
MW	Megawatt
O&M	Operations and Maintenance
PURA	Public Utility Regulatory Act
RFP	Rate filing package
Rider IRA	Rider to address tax impacts from the IRA
Rider RCE	Rate case expense rider
ROE	Return on equity
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
TCRF	Transmission Cost Recovery Factor
Test Year	12 months ending December 31, 2023

EXECUTIVE SUMMARY – OVERVIEW**(LYNNAE K. WILSON)**

CenterPoint Energy Houston Electric, LLC (“CenterPoint Houston” or the “Company”) has a long history of providing safe, reliable, value-added service to our customers. Since the Company’s last base rate proceeding in 2019, Docket No. 49421, the Company has continued to successfully meet the demands of our customers and the communities we serve with a more resilient, reliable, and dynamic transmission and distribution system. As a result, the Company now maintains and operates a transmission and distribution system for the benefit of approximately 2.8 million metered customers—nearly 300,000 more customers than the Company served when it filed its last rate base proceeding in 2019.

This filing presents both the opportunity to review CenterPoint Houston’s annual operations and maintenance (“O&M”) expenses, capital investment since the beginning of 2019, and to establish a solid foundation that enables CenterPoint Houston to continue meeting customer needs and the changing expectations and reliance of our customers, respond to regional growth and increasing electrification, and support Texas’ track record of strong economic development. This is vitally important because residential customer growth in the Company’s service territory is expected to continue at a rate of approximately two percent per year and CenterPoint Houston must be solidly positioned to respond to this demand. Additionally, the pace of industrial electrification and interconnections of renewable resources is continuing to increase in the Company’s service territory. Strong residential customer growth partnered with increased industrial electrification and generation interconnection activity require investment to ensure grid infrastructure meets

1 the current and future needs of our customers.

2 In establishing new transmission and distribution rates for CenterPoint Houston,
3 the Company asks the Public Utility Commission of Texas (“Commission”) to provide it
4 with the opportunity to earn a reasonable rate of return on its investment and to recover its
5 necessary O&M expenses, so that it can continue to provide safe and reliable electric
6 service. As shown in the Company’s application, the total cost of service for CenterPoint
7 Houston using a test year based on the 12 months ending December 31, 2023 (“Test Year”),
8 as adjusted for known and measurable changes, is approximately \$2.4 billion, excluding
9 costs related to wholesale transmission from others. This includes a proposed return on
10 equity of 10.4%, a capital structure of 55.1% debt and 44.9% equity, and a proposed overall
11 weighted cost of capital of 7.03% on a rate base of approximately \$12.1 billion. The
12 Company has invested over \$6.5 billion in transmission and distribution infrastructure
13 since the Company’s last rate case. If approved and implemented through the rates for
14 Retail Delivery Service, the impact on a residential customer using 1,000 kilowatt-hours
15 per month would be an increase of approximately \$1.25 per month.

16 My testimony provides an overview of the Company’s filing, its operations, and its
17 rate request. I also introduce the Company witnesses that support the requested rates. In
18 addition, my testimony highlights the Company’s commitment to its customers—a
19 commitment to modernizing electric delivery to create a stronger, smarter, more resilient,
20 and adaptable grid enabling continuing evolution of our customers’ and communities’
21 energy future. As a result, the Company has established investment pillars of system
22 growth, reliability, modernization, and clean energy enablement to focus efforts, enhance
23 resiliency, and drive system performance results.

1 The testimony and material provided in this filing evidence the Company's
2 commitment to our customers and our dedication to delivering safe and reliable electricity,
3 service and value. I look forward to working with the Commission and all stakeholders to
4 ensure the new rates established for CenterPoint Houston continue to allow the Company
5 to make necessary investments in its system to safely and reliably serve its customers and
6 support economic growth throughout Houston and the state of Texas.

DIRECT TESTIMONY OF LYNNAE K. WILSON

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND POSITION.

A. My name is Lynnae K. Wilson, and I am employed by CenterPoint Energy as Senior Vice President, Electric Business, leading all areas of CenterPoint Houston and Indiana Electric, serving approximately 2.9 million metered customers in the greater Houston and southwestern Indiana areas, and execution of the company's generation transition plan in Indiana.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I graduated from Missouri University of Science and Technology with a Bachelor of Science degree in Mining Engineering. I have 20 years of experience in combined natural gas and electric utilities and electric generation with CenterPoint Energy and predecessor companies, in addition to manufacturing and mining experience. Prior to my role as Senior Vice President, Electric Business, I held the role of Senior Vice President Houston Electric, leading the company's Houston-based electric utility, and Senior Vice President, High Voltage Operations, responsible for transmission, substation, three phase major underground and transmission system control operations in Indiana and Texas. I have also held executive roles with oversight for the Indiana Electric business and Generation transition and led predecessor Indiana/Ohio Gas and Electric utilities.

I am a member of the Electric Power Research Institute Research Advisory Council, Edison Electric Institute ("EEI") Member OpCo Leadership Working Group, Osmose Advisory Council, and I previously served as Vice Chair of the

**Direct Testimony of Lynnae Wilson
CenterPoint Energy Houston Electric, LLC**

1 Board of Directors of Reliability *First*. Additionally, I serve on the board for the
2 United Way of Greater Houston.

3 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

4 A. I am testifying on behalf of CenterPoint Houston.

5 **Q. HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE THE**
6 **COMMISSION OR OTHER REGULATORY AUTHORITIES?**

7 A. Yes. I have sponsored testimony in Cause No. 44910 before the Indiana Utility
8 Regulatory Commission on behalf of the predecessor Indiana Electric utility in
9 support of the description and development of the Company's Transmission,
10 Distribution, and Storage Improvement Charge Plan.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
12 **PROCEEDING?**

13 My testimony provides an overview of CenterPoint Houston and its operations. I
14 explain the Company's organizational and management structure and describe the
15 Company's commitment to its core values. I summarize the Company's
16 application, including the reasons and need for this filing and the witnesses
17 testifying in support of the request. I discuss the Company's efforts related to
18 reliability and resiliency, and the impact of economic and customer growth in the
19 Company's service territory since its last base rate case.

20 **Q. DO YOU SPONSOR OR CO-SPONSOR ANY SCHEDULES IN THIS**
21 **PROCEEDING?**

22 A. I am co-sponsoring the following Company schedules with Company witness
23 Kristie L. Colvin:

1 II-C-2.7 Capital Requirements and Acquisition Plans

2 II-C-2.7a Future Capital Requirements and Acquisition Plans

3 **Q. HAVE YOU INCLUDED ANY EXHIBITS WITH YOUR TESTIMONY?**

4 A. Yes. I supervised the preparation of the exhibits listed at the beginning of my
5 testimony.

6 **II. COMPANY DESCRIPTION**

7 **Q. PLEASE DESCRIBE CENTERPOINT HOUSTON'S CORPORATE**
8 **STRUCTURE.**

9 A. CenterPoint Houston is an indirect, wholly-owned subsidiary of CenterPoint
10 Energy, Inc. ("CNP"). Headquartered in Houston, Texas, CNP is an energy
11 delivery company with regulated utility businesses in six states. Through its
12 electric transmission and distribution, power generation and natural gas distribution
13 businesses, CNP serves more than seven million metered customers. Additional
14 information concerning CNP and its affiliates is available in CNP's Annual Reports
15 and SEC Form 10-K filings, which can be found on CNP's website,
16 www.centerpointenergy.com.

17 **Q. WHERE IS THE COMPANY'S PRINCIPAL OFFICE LOCATED, AND**
18 **WHERE ARE ITS RECORDS KEPT?**

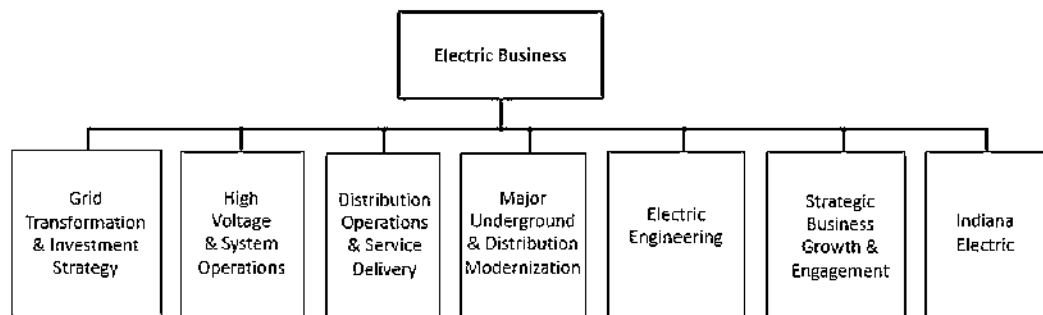
19 A. The Company's principal office is located at 1111 Louisiana Street, Houston,
20 Texas, and its books, accounts, and records are kept at that same location.

21 **Q. PLEASE DESCRIBE THE ORGANIZATIONAL STRUCTURE OF THE**
22 **COMPANY'S ELECTRIC OPERATIONS.**

23 A. The Company's organizational structure as of the end of the Test Year is shown in

the Figure 1 below.

Figure 1. Electric Operations Organizational Chart



CNP has two electric utilities – CenterPoint Houston and Indiana Electric. At the end of the Test Year, the Electric Business consisted of seven divisions shown above. Indiana Electric is shown for completeness of the Electric Business organizational structure, but Indiana Electric costs are not included in this filing. Within the six Operations divisions that comprise CenterPoint Houston, a variety of personnel, materials, supplies, vehicles, warehouses, offices, equipment and facilities located throughout CenterPoint Houston’s service area support the transmission and distribution delivery system around the clock every day of the year.

Q. HOW HAS THIS STRUCTURE CHANGED SINCE THE LAST RATE CASE, DOCKET NO. 49421?

A. At the time of the last rate case, Electric Operations consisted of four divisions: Engineering & Asset Optimization, High Voltage Operations, Distribution Operations, and Power Delivery Solutions. In December 2022, CenterPoint Houston implemented an organizational redesign to anticipate and respond to a rapidly transforming electric grid and align core engineering and operation functions.

1 The Grid Transformation and Investment Strategy officer was created to
2 ensure that CenterPoint Houston anticipates and responds to transformative
3 challenges, such as distributed generation, electric vehicles and mass
4 electrification, as well as ensure that our executed plans provide the modern and
5 resilient service that our customers demand. Additionally, this organization
6 oversees the capital program management department that provides clear line of
7 sight from project identification to project completion to enhance capital
8 deployment and management.

9 In January 2023, the Strategic Business Growth and Engagement officer
10 was created to engage with customers more meaningfully to support future growth
11 and reliability needs.

12 As shown in Figure 1, during the Test Year, CenterPoint Houston consisted
13 of six divisions: (1) the Grid Transformation and Investment Strategy division led
14 by company witness Eric D. Easton, (2) the High Voltage & System Operations
15 division led by company witness David L. Mercado, (3) the Distribution Operations
16 & Service Delivery division led by company witness Deryl Tumlinson, (4) the
17 Major Underground (“MUG”) & Distribution Modernization division led by
18 company witness Randal M. Pryor, (5) the Electric Engineering division led by
19 company witness Mandie W. Shook, and (6) the Strategic Business Growth and
20 Engagement division led by company witness Rina H. Harris¹. Each company
21 witness further describes their division in their testimony.

¹ Based on organizational structure on 12/31/2023, Strategic Business Growth & Engagement division led by Rina Harris is included with Operations in this proceeding. The division has since moved to the Customer Experience Organization.

1 **Q. HOW MANY CUSTOMERS ARE SERVED BY CENTERPOINT**
2 **HOUSTON?**

3 A. CenterPoint Houston serves approximately 2.8 million metered customers. The
4 Company's electric system covers approximately 5,000 square miles located in and
5 around Houston, Texas and is comprised of over 60,000 miles of overhead and
6 underground transmission and distribution lines. Company witness John R.
7 Durland calculates the adjusted Test Year average number of customers. A map of
8 the CenterPoint Houston service area appears in Exhibit LKW-1.

9 **Q. ARE THE COMPANY'S SERVICE AREA AND CUSTOMER PROFILE**
10 **UNIQUE?**

11 A. Yes. CenterPoint Houston's service area is a uniquely compact and dense region
12 on the Texas Gulf coast. While the Company's service area is only about 2% of
13 the geographic area of Texas, the customers who live and work in the Company's
14 service area account for approximately 25% of the Electric Reliability Council of
15 Texas' ("ERCOT") total load.

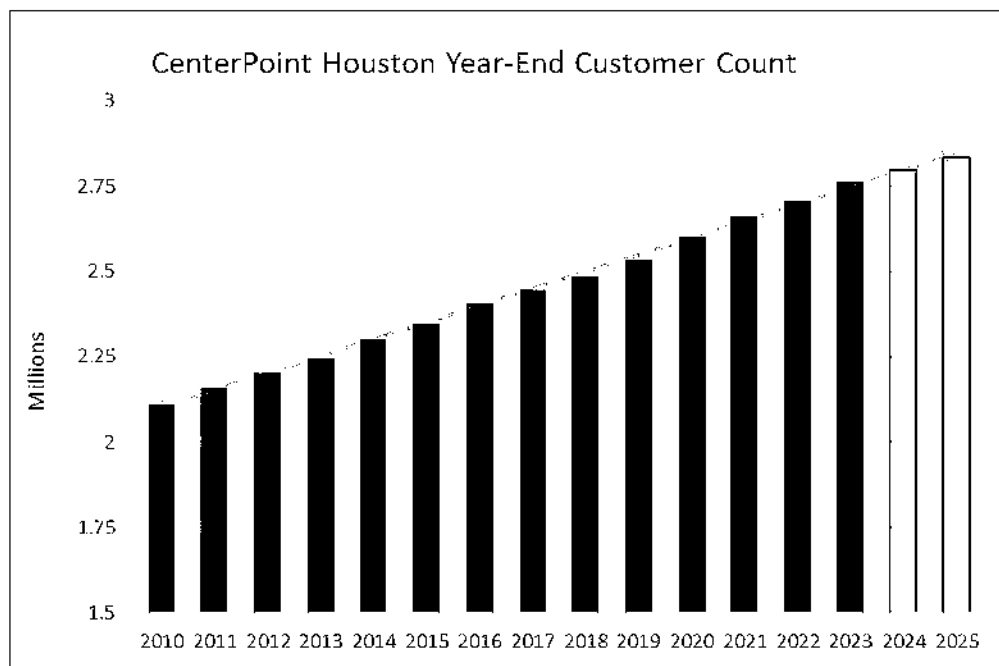
16 **Q. PLEASE EXPLAIN FURTHER.**

17 A. The uniquely concentrated nature of the Company's service area is attributable to
18 a few factors. First, from a population perspective, the city of Houston is the largest
19 city in the state, and the Greater Houston area is the fifth largest metropolitan area
20 in the country and ranked second among the country's major metro areas in
21 population growth in 2022. As a result of the large population and anticipated
22 population growth in the Greater Houston area, the Company serves a large number
23 of residential and commercial customers. Second, the Greater Houston area has a

1 large presence of petroleum and petrochemical refineries, meaning the Company
2 has many industrial customers with high demand which consume large amounts of
3 electricity. Third, the Greater Houston area has several important public-serving
4 facilities and infrastructure. For example, the Texas Medical Center, which is the
5 world's largest medical complex and home to multiple medical and research
6 institutions, is in the city of Houston. Likewise, the Port of Houston, which is one
7 of the country's busiest container ports, is in the Greater Houston area. Finally, the
8 city of Houston has two airports, George Bush Intercontinental Airport and William
9 P. Hobby Airport, which serve millions of passengers and are local hubs for
10 connecting flights.

11 **Q. HAS CENTERPOINT HOUSTON SEEN RESIDENTIAL AND**
12 **COMMERCIAL CUSTOMER GROWTH SINCE THE LAST RATE CASE,**
13 **DOCKET NO. 49421?**

14 A. Yes. The Greater Houston area is the fifth largest metropolitan area in the country.
15 As shown on Figure LW-2, CenterPoint Houston serves much of this fast-growing
16 area.

Figure LW-2: CenterPoint Houston Year End Customer Count

The population in and around Houston grew from approximately 5.9 million in 2010 to nearly 7.34 million in 2022, an increase of more than 24 percent. Among the Houston area's 10 counties, two—Harris and Fort Bend—ranked among the top nationwide for largest population gains in 2022. Additionally, Harris County is leading the top five largest-gaining counties in Texas, and Fort Bend is among the top five fastest-growing counties in the state. As a result, the Company has experienced the addition of nearly 300,000 metered customers from January 1, 2019, through December 31, 2023. Company witnesses Mr. Easton, Mr. Tumlinson, Mr. Pryor, Mr. Mercado and Ms. Harris discuss the impact of this customer growth from an infrastructure perspective.

Q. HAS CENTERPOINT HOUSTON ALSO SEEN LOAD GROWTH IN THE INDUSTRIAL SECTOR?

1 A. Yes. As with residential customer growth, CenterPoint Houston has also seen
 2 tremendous industrial load growth, both in areas with existing transmission
 3 infrastructure and also in areas where transmission infrastructure is less
 4 concentrated. Electrification of existing industrial customer processes, as well as
 5 future hydrogen projects that may also be sited in the Company's service area,
 6 would contribute to further industrial load growth. Company witness Mr. Mercado
 7 discusses the impact of industrial load growth on the system.

8 **Q. HOW DOES CENTERPOINT HOUSTON VIEW ITS ROLE IN**
 9 **PROVIDING SERVICE TO ITS CUSTOMERS?**

10 A. The Company takes its obligation to provide safe and reliable service very seriously
 11 and is committed to providing safe and reliable service. The Greater Houston area
 12 is a vital economic hub in Texas, and the Company is keenly aware of the role it
 13 plays supporting the stability and economic growth of the Greater Houston area.
 14 The service provided by the Company enriches the communities it serves and
 15 enables millions of homes and businesses to function. The Company's investment
 16 in its transmission and distribution system ensures that the Company continues to
 17 provide safe and reliable service to the Company's residential, commercial, and
 18 industrial customers.

19 Customers are a CenterPoint Houston central priority. As a result, in 2023,
 20 the Company created a new division – Strategic Growth and Engagement, led by
 21 company witness Ms. Harris to provide intentional focus and formalize supporting
 22 growth in our communities and to provide a higher level of customer engagement
 23 to better understand customers' business objectives and in turn better support

1 customers' growth and reliability needs.

2 **Q. IS THERE A MEASUREMENT THAT CENTERPOINT HOUSTON USES**
3 **TO ASSESS SERVICE QUALITY OF ITS CUSTOMERS?**

4 A. Yes. The Company uses and reports to the Commission System Average
5 Interruption Duration Index ("SAIDI") and System Average Interruption
6 Frequency Index ("SAIFI") performance annually. SAIDI is the average number of
7 forced outage minutes per customer per year. SAIFI is the average number of times
8 that a customer's service is interrupted per year. Taken together SAIDI and SAIFI
9 are an indication of system reliability and performance. Company witnesses Mr.
10 Easton, Mr. Pryor, Mr. Tumlinson, and Ms. Shook discuss programs and
11 investments to enhance reliability and thereby SAIDI and SAIFI performance.

12 **Q. HAVE THERE BEEN PARTICULAR CHALLENGES THAT AFFECT**
13 **CENTERPOINT HOUSTON'S SAIDI AND SAIFI PERFORMANCE?**

14 A. Yes. First, the rapid growth I described above forces the Company to undertake the
15 repair or replacement of equipment that are nearing end of useful life at the same
16 time we are working to build brand new facilities to interconnect new customers.
17 Second, weather has an effect on SAIDI and SAIFI. While longer duration weather
18 events are excluded, weather still has a strong influence in the SAIDI and SAIFI
19 calculations. For example, in 2019, CenterPoint Houston's Velasco 03 feeder
20 exceeded the Company's SAIFI system-wide average by more than 300% primarily
21 because of weather-related issues. We completed a distribution development plan
22 for the feeder and spent more than \$300,000 in capital improvements and trimmed
23 vegetation along the entire circuit. The Company has not identified a SAIFI or

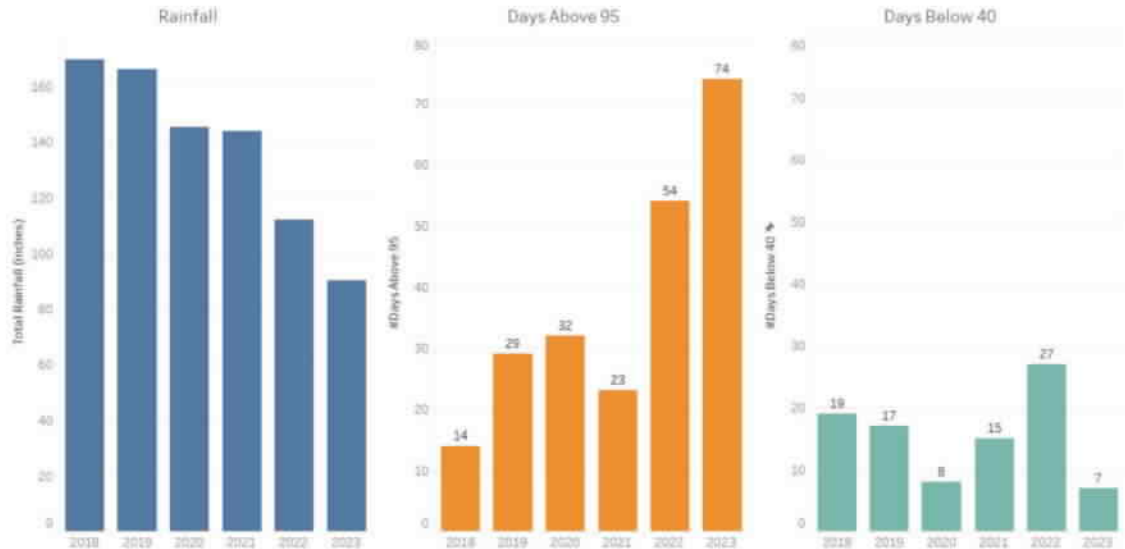
1 SAIDI violation on that circuit since 2019.

2 **Q. ARE THE CORRECTIVE ACTIONS TAKEN BY THE COMPANY WITH**
3 **REGARD TO VELASCO 03 PURSUANT TO THE COMPANY'S PROCESS**
4 **WITH REGARD TO DISTRIBUTION FEEDERS THAT HAVE SAIDI OR**
5 **SAIFI ISSUES?**

6 A. Yes. As further explained in the testimony of Mr. Tumlinson, the Company has a
7 Root Cause Analysis Program in which the Company annually reviews the SAIDI
8 and SAIFI for each distribution feeder. Corrective action plans are created and
9 implemented for each distribution feeder that is in the bottom 10% of either SAIDI
10 or SAIFI. Similarly, inspections and corrective action plans are created and
11 implemented for distribution feeders that have SAIDI or SAIFI values that are
12 300% greater than the Company's systemwide SAIDI or SAIFI, like Velasco 03 in
13 2019.

14 **Q. HAS CENTERPOINT HOUSTON SEEN AN INCREASE IN MAJOR**
15 **WEATHER ACTIVITY?**

16 A. Yes. The following graph summarizes the precipitation and temperature changes in
17 the Company's service area from 2018 to 2023.



Notable major weather condition-related events that occurred in the Company's service area in recent history are the Memorial Day flooding in 2015, Hurricane Harvey in 2017, a microburst event in Sealy in 2017, an ice storm in 2018, Winter Storm Uri in 2021, Hurricane Nicholas in 2021, Winter Storm Elliott in 2022, an F3 tornado in January 2023, and a microburst event in June 2023. Additionally, the Houston area experienced drought conditions in 2022 and 2023.

Q. WHAT HAS BEEN THE IMPACT TO CUSTOMERS FROM THE INCREASE IN MAJOR WEATHER?

A. These major weather events ranged from winter storms to high wind events caused by hurricanes or tornadic activity to drought conditions. Each event had its impact on the system. Drought conditions lead to dead or stressed trees that are more susceptible to high winds. Any system damage as a result of weather events in turn caused customer outages. Company witnesses Mr. Tumlinson and Mr. Mercado further describe the impact on customers in their direct testimonies.

1 **Q. HAS THE COMPANY TAKEN ACTION TO IMPROVE ITS SAIDI AND**
2 **SAIFI PERFORMANCE?**

3 A. Yes. The Company is and always will be committed to focus its efforts and
4 implement programs to limit the number of outages and the duration of those
5 outages. This work includes enhancing the Company's advanced distribution
6 management system ("ADMS") used by its distribution controllers to decrease the
7 time required to assign a crew to improve restoration time. The Company also
8 committed to piloting its ADMS's automated fault locating, isolating, and service
9 restoration functionality to further reduce restoration times. In addition,
10 CenterPoint Houston has:

- 11 • increased the number of distribution switching devices that can be remotely
12 controlled by the Company's distribution SCADA system;
- 13 • increased spending on reliability and maintenance projects to enhance
14 reliability including grid hardening, installation of intelligent grid switching
15 devices (IGSDs), overhead reliability, pole improvements and
16 replacements, and URD improvements and replacements;
- 17 • focused on proactive and reactive vegetation management (2020: \$28.8
18 million spent; 2021: \$30 million spent; 2022: \$31.9 million spent);
- 19 • increased infrared inspections on distribution circuits to identify pending
20 equipment failures before they occur.
- 21 • used its Root Cause Analysis Program to identify the projected 10% worst
22 performing circuits;
- 23 • performed inspections of distribution laterals that had recurring outages
24 through its Hot Fuse Program; and
- 25 • continued to replace damaged or failed meters.

26 The Company's automation efforts, such as the strategic installation of IGSDs has
27 enabled the Company to avoid approximately 55.69 million and 83.37 million
28 customer outage minutes (or approximately 20.65 and 30.47 SAIDI minutes) in

1 2022 and 2023, respectively. This work as well as the ongoing work described by
2 Company witnesses Mr. Easton, Mr. Pryor, Ms. Shook and Mr. Tumlinson,
3 continues to support the safe and reliable operation of CenterPoint Houston's
4 system.

5 **Q. HAS CENTERPOINT HOUSTON REPORTED ITS SAIDI AND SAIFI**
6 **PERFORMANCE FOR 2023?**

7 A. Yes. CenterPoint Houston reported its 2023 performance to the Commission on
8 February 15, 2024. While CenterPoint Houston exceeded the system-wide
9 standards for its SAIDI and SAIFI metrics and four feeders that had a SAIFI value
10 more than 300% greater than the system SAIFI, it improved its metrics over its
11 performance in 2022. CenterPoint Houston takes its obligations to provide reliable
12 service to customers very seriously, and although the Company can continue to
13 improve, the challenges it has faced related to the intense growth in our service
14 territory and impacts from extreme weather has limited the ability of the Company
15 to make the level of improvement it's striving to achieve. And as discussed by
16 Company witnesses Shonda Royston-Johnson and Ms. Harris in their testimony
17 and as I discuss later in my testimony, despite the need to improve performance,
18 the Company has received high praise from its customers and awards for its
19 customer service.

20 **Q. WHAT OTHER STEPS HAS THE COMPANY TAKEN SINCE ITS LAST**
21 **RATE CASE TO ENHANCE SYSTEM SAFETY, RELIABILITY AND**
22 **RESILIENCY?**

23 A. CenterPoint Houston has implemented a number of programs and initiatives

1 designed to enhance the safety, reliability, and resiliency of the transmission and
2 distribution system as further described in the direct testimonies of Company
3 witnesses Mr. Easton, Mr. Pryor, and Mr. Tumlinson. CenterPoint Houston's
4 experiences with Hurricanes Ike and Harvey have additionally led the Company to
5 engage in system hardening and resilience activities. As discussed in the direct
6 testimony of Company witness David Mercado, the Company has retrofitted
7 several substations with an elevated substation design to account for storm surge or
8 other flooding. New coastal substations are designed and constructed such that the
9 control cubicles are elevated above the potential storm surge for a Category 5 storm,
10 while inland substations are designed to elevations that consider flood plain maps.
11 These and other storm hardening activities² are designed to improve system
12 performance during and after major weather events. The Company also continues
13 to modernize its practices and infrastructure through the use of new technologies,
14 distribution automation, data analytics and other system improvements further
15 described in the direct testimony of Company witness Mr. Easton.

16 **Q. HOW DOES THE COMPANY ENSURE SAFETY, RELIABILITY AND**
17 **RESILIENCY ON A DAY-TO-DAY BASIS?**

18 A. Our employees adhere to the core values of Safety, Integrity, Accountability,
19 Initiative, and Respect in serving our customers and communities. CenterPoint
20 Houston employees and contractors are expected to abide by all applicable laws,
21 regulations, Company policies, procedures and guidelines for safely working and

² See *Report for Electric Utility Infrastructure Storm Hardening Pursuant to P.U.C. Subst. R. 25.95*, Project No. 39339, CenterPoint Energy Houston Electric, LLC Storm Hardening Report Summary (April 28, 2023).

1 operating the Company's systems. Employees are held accountable for reporting
2 incidents, and unsafe practices and conditions, so that they can be promptly
3 addressed. The Company continually works to improve by embracing innovation
4 and technology that modernizes the grid and enhances performance. CenterPoint
5 Houston also develops and maintains safety programs to educate and inform
6 customers and the public in the communities where we operate.

7 **Q. WHAT APPROACH HAS CENTERPOINT HOUSTON TAKEN TO**
8 **MINIMIZE THE RISK OF MAJOR WEATHER?**

9 A. To mitigate the impact of extreme weather events, the Company has invested in
10 and continues to invest in a variety of reliability, modernization, and resiliency
11 projects.

12 **Q. HOW HAS THE COMPANY POSITIONED ITSELF TO ADDRESS THE**
13 **NEEDS OF A GROWING CUSTOMER BASE AND RAPIDLY**
14 **TRANSFORMING GRID?**

15 A. To meet the demands of a growing customer base and rapidly transforming grid,
16 CenterPoint Houston has focused capital investments in four main pillars: system
17 growth, reliability, modernization, and clean energy enablement. System growth
18 consists of investments supporting the 2% annual organic customer growth
19 experienced in the Company's service territory. Reliability improvements consists
20 of investments made to extend the life of assets and replace aging infrastructure.
21 Modernization consists of investments in enhanced technology, and philosophy and
22 design updates to increase resiliency. Clean energy enablement consists of
23 investments made to interconnect renewable generation resources. As further

1 discussed by Company witness Mr. Easton, the clean energy enablement pillar was
2 identified in response to observed trends related to the types of generation requests
3 CenterPoint Houston has received. The number of interconnections and the
4 timeframe for interconnection differ for inverter-based resources (solar, wind, and
5 energy storage) compared to dispatchable generation. Factors such as the passage
6 of the Infrastructure Investment and Jobs Act³ which has accelerated the number of
7 projects seeking interconnection, has prompted the Company to create this pillar to
8 highlight the drivers of these types of interconnections and refocus the way the
9 Company approaches new interconnections.

10 Collectively these investments contribute to overall performance and
11 resiliency of the electric system serving the Greater Houston area. Each of the
12 operations witnesses will discuss drivers for capital investments in their areas of
13 responsibility that all underlie these four pillars.

14 **Q. HAVE THE COMPANY'S EFFORTS PROVIDED VALUE TO ITS**
15 **CUSTOMERS?**

16 A. Yes. CenterPoint Houston is committed to putting the customer at the center of
17 everything we do, and our customer service organization prides itself on its ability
18 to consistently provide reliable, value-added service to customers. This emphasis
19 on customer service and reliable performance has led our customers to highly value
20 the service we provide. For example, the American Customer Satisfaction Index
21 ranked CenterPoint Houston first for residential customer satisfaction among
22 national investor-owned utilities in 2022 and second in 2023.

³ Pub. L. No. 117-58, 135 Stat.429 (2021).

1 Additionally, in 2023 Cogent Syndicated ranked CenterPoint Houston
2 second among Texas Transmission and Distribution Service Providers on Engaged
3 Customer Relationship with residential customers and first with business
4 customers. Company witnesses Ms. Royston-Johnson and John Sousa provide
5 additional detail regarding the broad recognition the Company has received for its
6 customer service and other activities.

7 Furthermore, the Strategic Business Growth and Engagement division
8 provides focus to large customers, while ensuring that customers of all sizes receive
9 reliable service. Efforts in 2023 have resulted in several large customers providing
10 letters of support for CenterPoint Houston as further described in the direct
11 testimony of Company Witness Ms. Harris.

12 **Q. HOW HAS CENTERPOINT HOUSTON SUPPORTED COMMUNITIES**
13 **IN ITS SERVICE TERRITORY?**

14 A. CenterPoint Houston is a key partner in the communities we serve. To fulfill that
15 role, the CenterPoint Energy Foundation (“Foundation”) supports communities in
16 ways that improve lives today and build a strong, sustainable foundation for the
17 future. Grant funding from the Foundation is invested in two main strategic areas:
18 community vitality and education. The Foundation also responds to communities
19 during times of disaster and plays an essential role in providing disaster relief grants
20 to support recovery efforts. Company witness Mr. Sousa provides more detail
21 around the Foundation’s activities.

22 **Q. HAS THE COMPANY BEEN RECOGNIZED FOR ANY PARTICULAR**
23 **SUCCESSES SINCE ITS LAST RATE CASE, DOCKET NO. 49421?**

1 A. Yes, it has. CenterPoint Houston has received several awards for technology and
2 innovation including:

- 3 • Association of Edison Illuminating Companies – Achievement Award – for
4 Resiliency Model for Electromagnetic Pulse (“EMP”) Mitigation, 2020;
- 5 • EPRI – Technology Transfer Award – for E1 EMP & Hardening of
6 Substations, 2021; and
- 7 • Public Utilities Fortnightly – Edith Clarke Top Innovator Award in
8 Reliability, 2023.

9 From 2019 through 2023, CenterPoint Houston has received 12 EEI Emergency
10 Assistance Awards in recognition of its outstanding efforts to restore service
11 following a storm or other natural disaster through mutual assistance, including six
12 hurricanes in 2020 alone.

13 Additionally, CenterPoint Houston has received numerous awards and recognition
14 from the National Diversity Council and the Texas Diversity Council for its work
15 and leadership in diversity, equity, and inclusion including:

- 16 • National Diversity Council
 - 17 ○ Individual Diversity First Award, 2023
 - 18 ○ National Latino Leaders Award, 2023
 - 19 ○ Top 50 Companies for Inclusion in Texas, 2022
 - 20 ○ Top General Counsel Award, 2022
- 21 • Texas Diversity Council
 - 22 ○ Diversity Leadership Award, 2022
 - 23 ○ Top 100 Influential Women in Energy, 2021
 - 24 ○ Top 100 Diverse Leaders in Energy, 2021

25

1 **III. OVERVIEW OF THE COMPANY'S RATE CASE FILING**

2 **Q. WHY IS THE COMPANY FILING THIS CASE AND WHAT DOES IT**
3 **HOPE TO ACCOMPLISH?**

4 A. The Company is making this filing in compliance with the Commission's final
5 order in Docket No. 49421, the Company's last base rate proceeding, and the
6 Commission's rules.⁴ This filing will allow the Commission to determine the
7 prudence of the capital investment made in the CenterPoint Houston system since
8 the test year in the Company's last base rate case, Docket No. 49421, and consider
9 updates to CenterPoint Houston's capital structure and return on equity ("ROE").
10 The rates requested in this filing are reflective of the Company's current reasonable
11 and necessary cost of service and operations. Moving forward, the filing will allow
12 the Company to address its current revenue requirement deficiency so the Company
13 may continue investing in safe and reliable infrastructure now and in the future.

14 **Q. HAS THE CURRENT REGULATORY FRAMEWORK IN TEXAS**
15 **ENABLED THE COMPANY TO INVEST IN SAFE AND RELIABLE**
16 **INFRASTRUCTURE SINCE DOCKET NO. 49421?**

17 A. Yes. The current regulatory framework has been constructive and has allowed
18 CenterPoint Houston to make necessary investments in its system. In particular,
19 the periodic adjustments CenterPoint Houston is able to make to its base rates
20 through Transmission Cost of Service adjustments in accordance with 16 TAC
21 § 25.192 and Distribution Cost Recovery Factor adjustments in accordance with
22 the Public Utility Regulatory Act ("PURA") and 16 TAC § 25.243 have allowed

⁴ *Application of CenterPoint Energy Houston Electric, LLC for Authority to Change Rates*, Docket No. 49421, Final Order at Finding of Facts, 124 and Ordering Paragraph 17 (Mar. 9, 2020).

1 the Company to gradually modify its rates to track ongoing changes in its invested
2 capital, thereby avoiding the necessity for an even larger incremental rate change
3 in this proceeding. These mechanisms, combined with the Company's disciplined
4 financial approach and adherence to its core values, have enabled the Company to
5 maintain its credit rating so it can access the credit markets on reasonable terms to
6 obtain the capital required to invest in system safety, reliability, and modernization.
7 As I discuss below, however, Commission approval of an updated capital structure
8 and return on equity are necessary to maintain this constructive framework going
9 forward in light of the impacts of customer growth on CenterPoint Houston.

10 **Q. HOW HAS GROWTH IMPACTED THE COMPANY SINCE ITS LAST**
11 **BASE RATE PROCEEDING?**

12 A. The significant growth in the Company's service territory and the state of Texas
13 has been the primary driver of the Company's capital investment since the final
14 order was issued in Docket No. 49421. Since January 1, 2019, CenterPoint Houston
15 has invested over \$6.5 billion in transmission and distribution infrastructure to
16 safely and reliably support economic and population growth in Houston and its
17 surrounding cities. This is approximately the same level of capital investment the
18 Company made between January 1, 2010, and December 31, 2018, the capital
19 investment period in Docket No. 49421, which was almost twice as long as the
20 capital investment period here. Since the beginning of 2019, CenterPoint Houston
21 has built six new distribution substations and two new transmission substations.
22 This investment has allowed CenterPoint Houston to extend service to nearly
23 300,000 new customers. Additionally, CenterPoint Houston has leveraged its

1 approximately 2.8 million advanced meters and improved the intelligence and
2 resiliency of its transmission and distribution system. With customer growth in the
3 Company's service territory expected to continue at approximately two percent per
4 year, it is important through this filing to establish rates that will allow CenterPoint
5 Houston to continue to efficiently and innovatively meet the needs of its customers
6 for years to come.

7 **Q. HAS GROWTH IN THE COMPANY'S SERVICE TERRITORY BEEN**
8 **LIMITED TO RESIDENTIAL CUSTOMERS?**

9 A. No. As a port city and trade center, economic and industrial growth in the Houston
10 area has been a key driver of the Company's investment needs. From 2019 through
11 the end of 2023, the Company has energized ten new transmission-connected
12 customer substations and anticipates load growth at another four existing sites. The
13 most significant load growth has been in the Freeport, Mont Belvieu and Houston
14 Ship Channel areas supporting a large liquified natural gas complex and chemical
15 refining presence. Transmission Planning is also studying 29 new customer load
16 projects, with an aggregate demand of approximately 9,899 MW, nearly twice the
17 size of the entire peak transmission customer demand in Summer 2023. Please see
18 the testimony of Company witness Mr. Mercado for further discussion of this large
19 non-residential load growth.

20 **Q. HOW HAS ECONOMIC GROWTH IN THE COMPANY'S SERVICE**
21 **TERRITORY IMPACTED THE COMPANY'S NEED TO INVEST IN ITS**
22 **SYSTEM?**

23 A. Houston is a vibrant, growing, international port city and trade hub. The Port of

1 Houston complex alone ranked first in the United States in foreign waterborne
2 tonnage, first in total foreign and domestic waterborne tonnage, and second in terms
3 of total foreign cargo value. It is the largest port in Texas and largest Gulf Coast
4 container port, handling 73% of United States Gulf Coast container traffic, up from
5 69% in 2018. Similarly, the Texas Medical Center is the largest medical complex
6 in the world, with an estimated 8 million patients per year visiting a campus of over
7 50 million square feet. Investments necessary to connect large scale commercial
8 operations to the Company's system, such as those described in the testimony of
9 Ms. Harris, serve to ensure the continued economic success of Houston, the state
10 of Texas, and the country. That investment has been a necessary component of the
11 area's economic growth and driver of the Company's capital investment plan.

12 **Q. HOW HAS THE INCREASE IN INTERCONNECTION REQUESTS BY**
13 **NEW GENERATION RESOURCES IMPACTED THE COMPANY'S NEED**
14 **TO INVEST IN ITS SYSTEM?**

15 A. The increase in interconnection requests by new generation resources has been a
16 significant driver for investing in the transmission system. From 2019 through the
17 end of 2023, the Company has interconnected 25 new generation resources with a
18 planned capacity of approximately 6,500 MW. Ten generation resources were
19 interconnected at existing switching stations. The remaining fifteen generation
20 resources required the construction of new 138 kV or 345 kV switching stations as
21 further described by Company witness Mr. Mercado.

22 **Q. WHAT FACTORS HAVE IMPACTED THE COMPANY'S ONGOING**
23 **FINANCING NEEDS?**

1 A. As discussed in the direct testimony of Company witnesses Jacqueline M. Richert
2 and Jennifer K. Story, the Inflation Reduction Act of 2022 (“IRA”) imposes a new
3 Corporate Alternative Minimum Tax (“CAMT”) and the Company expects that
4 CNP will be subject to the 15% minimum tax payment in 2024. The cash outlay
5 associated with the CAMT will likely impair CenterPoint Houston’s credit
6 metrics. In particular, reduced cash from operations and earnings before interest,
7 taxes, depreciation, and amortization metrics have the strong potential to cause
8 rating agencies to issue lower credit ratings for CenterPoint Houston absent a
9 constructive response from the Commission that includes an increase in the
10 Company’s authorized equity ratio and ROE.

11 To counter this negative impact and facilitate CenterPoint Houston’s ability
12 to respond to economic growth, the Company is requesting that its actual capital
13 structure of 44.9% equity and 55.1% long-term debt and an ROE of 10.4% be used
14 to set rates. Ms. Richert explains that a 44.9% equity ratio will help CenterPoint
15 Houston move its current issuer rating to A3. Company witness Ann Bulkley
16 explains that an ROE of 10.6% is supported by her analysis, but the Company has
17 decided to propose an ROE of 10.4% which as explained by Company witnesses
18 Ms. Richert and Jason M. Ryan will continue to allow the Company to attract
19 capital and fund the necessary system investment required to safely and reliably
20 respond to system growth, and efficiently and innovatively meet the needs of its
21 customers.

22 **Q. PLEASE DESCRIBE CENTERPOINT HOUSTON’S FILING IN THIS**
23 **CASE.**

1 A. The Company's filing has been prepared consistent with the requirements of PURA
2 and the Commission's Substantive and Procedural Rules, including the
3 Transmission and Distribution Investor-Owned Utilities Rate Filing Package
4 ("RFP") for Cost-of-Service Determination, adopted by the Commission in Docket
5 No. 49199. CenterPoint Houston's filing is based on a test year ended December
6 31, 2023. In addition to the Company's Application and Statement of Intent
7 ("Application"), the components of the filing include the sworn direct testimony of
8 29 internal and external witnesses, direct testimony workpapers, revised tariffs,
9 required schedules, and schedule workpapers. The filing reflects the considerable
10 efforts of many Company employees and additional external resources, and it
11 provides an accurate and transparent view of our business. The witnesses
12 submitting direct testimony in support of CenterPoint Houston's Application and
13 the topics they address are described in the table attached to my testimony as
14 Exhibit LKW-2.

15 **Q. WHAT IS THE TOTAL COST CENTERPOINT HOUSTON INCURS TO**
16 **PROVIDE SERVICE TO ITS CUSTOMERS?**

17 A. As described and supported in the Company's RFP, CenterPoint Houston's total
18 cost of service based on a Test Year ended December 31, 2023, as adjusted for
19 known and measurable changes, is approximately \$2.4 billion, excluding costs
20 related to wholesale transmission from others. This includes a proposed ROE of
21 10.4%, a capital structure of 55.1% debt and 44.9% equity, and a proposed overall
22 weighted average cost of capital of 7.03% on a rate base of approximately \$12.1
23 billion. As demonstrated by Company witness Ms. Colvin's testimony, the

1 Company has prepared the filing using actual Test Year books and records, adjusted
2 for known and measurable changes, and using traditional and widely accepted
3 ratemaking principles.

4 **Q. WHY IS NECESSARY TO REMOVE COSTS RELATED TO**
5 **WHOLESALE TRANSMISSION FROM OTHERS FROM THE COST OF**
6 **SERVICE?**

7 A. As described by witness Mr. Durland, the Company is not proposing a transmission
8 function charge in this rate case since the retail transmission costs are recovered
9 through the Transmission Cost Recovery Factor ("TCRF") and not through base
10 rates. Additionally, as explained by Company witness Mr. Durland, consistent with
11 16 TAC § 25.193 and Rider TCRF, the Company will be required to update the
12 TCRF to reflect any changes in wholesale transmission rates separate from this rate
13 case.

14 **Q. WHAT EFFECT WOULD THE COMPANY'S PROPOSED RATE HAVE**
15 **ON RESIDENTIAL CUSTOMERS?**

16 A. As a result of IRA, the Company could be subject to the CAMT. Therefore, the
17 Company is requesting approval of a tax rider ("Rider IRA") to ensure that the
18 impacts of the IRA are captured on an annual basis. As set out in the direct
19 testimony of Company witness Mr. Durland, the Company's filing shows an
20 increase for residential customers over adjusted test year Retail Delivery Service
21 revenues of approximately \$74 million, or approximately 8%, for the Customer,
22 Meter, and Distribution portion of the bill. The TCRF without the over-under is
23 expected to increase by approximately \$0.74. TC5 is expected to be retired during

1 this proceeding and results in a decrease of \$1.92 per 1000kWh. If approved and
2 implemented through the rates for Retail Delivery Service, the impact on a
3 residential customer using 1,000 kwh per month, including current and proposed
4 tariff riders would be an increase of approximately \$1.25 per month. A customer
5 with a retail plan that charges 17.67 cents a kWh would see their rate go to 17.79
6 cents per kWh, or a 0.71% increase in their total bill. The extent to which these
7 additional charges would be passed on by Retail Electric Providers is a function of
8 the competitive market.

9 **Q. WHAT ARE THE PRIMARY DRIVERS OF THE REVENUE**
10 **REQUIREMENT IN THIS CASE?**

11 A. As also discussed by Company witness Mr. Ryan, the area served by CenterPoint
12 Energy Houston is growing rapidly and faces extreme weather. The combination of
13 rapid growth and extreme weather demands significant levels of investment in the
14 Company's transmission and distribution system. CenterPoint Houston's total
15 gross plant in service since the end of the test year presented in Docket No. 49421
16 has increased approximately \$6.3 billion. This investment includes 2,188
17 additional miles of distribution lines, 101 new miles of transmission lines, six new
18 distribution substations and six new transmission substations, and associated plant
19 in service necessary to meet the demands of a growing service territory. Since the
20 Company's last base rate case, there has been an approximate 11% increase in the
21 number of metered customers, yet during that same time, O&M (excluding
22 wholesale transmission costs that are recovered through the TCRF) have decreased,
23 even without considering the impact of inflation. This reduction from 2019 level

1 of O&M has helped to partially offset the increase in other costs needed to safely
2 and reliably serve an increased number of customers. Additionally, the Company's
3 need to install technology upgrades and conversions required to maintain support
4 or ensure data and cybersecurity are impacting the Company's cost of service. As
5 discussed in the direct testimonies of CenterPoint Houston's witnesses, these are
6 reasonable and necessary costs incurred to safely and reliably serve the Company's
7 larger and expanding footprint.

8 **Q. HAS THE COMPANY PROVIDED A SUMMARY COMPARISON OF THE**
9 **PROPOSED COST OF SERVICE AND THE APPROVED COST OF**
10 **SERVICE IN DOCKET NO. 49421?**

11 A. Yes. Consistent with RFP General Instruction No. 2, my Exhibit LKW-3 contains
12 a comparison of the rate base, rate of return, sales/other revenues, operating
13 expenses by major category and operating income as authorized in CenterPoint
14 Houston's last rate case and as proposed in this proceeding. In addition to the
15 required summary information presented on page 1 of Exhibit LKW-3, I am
16 including more detailed comparisons of rate base and cost of service components
17 on pages 2 and 3 of this exhibit.

18 **Q. IS THE COMPANY MAKING ANY OTHER REQUESTS IN THIS CASE?**

19 A. Yes. CenterPoint Houston seeks approval of various tariff and rate schedule
20 changes, including as noted above the establishment of the Rider IRA to address
21 the impact of the CAMT on the Company going forward. Other tariff revisions
22 include updating the Nuclear Decommissioning Rider based on the final order in
23 Docket No. 55303, updating the TCRF Rider, removing the system restoration

1 charge from the Tariff for Retail Delivery Service, removing the Accumulated
2 Deferred Federal Income Tax Credit rider, and removing the Transmission Charge
3 in the Tariff for Retail Delivery Service. In addition, the Company is proposing to
4 update the charges for Discretionary Services consistent with the methodology
5 approved in 49421. The Company also proposes to revise the Tariff for Retail
6 Delivery Service to incorporate the applicable terms of service in the relevant rate
7 schedules to which the terms apply, and to reorganize some provisions in a more
8 logical structure. CenterPoint Houston proposes to update the Wholesale
9 Transmission Service Tariff to reflect CenterPoint Houston's current cost of
10 providing this service.

11 Regarding the cost-of-service portion of the request, the Company's filed
12 cost of service data demonstrates that CenterPoint Houston's total annual cost of
13 service (excluding wholesale transmission from others) totals approximately
14 \$2.365 billion while current annual revenues are approximately \$2.305 billion
15 (including the revenue from the interim DCRF rates set in docket 55993 that will
16 soon be implemented). Consequently, there is a total annual net revenue deficiency
17 under existing rates of approximately \$60 million⁵, after adjustments for known
18 and measurable changes. The Company proposes to eliminate this annual earnings
19 deficiency and to have its rates set at a level to provide a reasonable opportunity to
20 earn a reasonable ROE of 10.4%.

21 **Q. HAS THE COMPANY MANAGED O&M EXPENSES SINCE ITS LAST**
22 **BASE RATE PROCEEDING?**

⁵ Note that Schedule I-A which shows a \$63.8 million proposed adjustment to rates includes the impact of updated Nuclear Decommission charges and proposed Rider RCE.

1 A. Yes. As noted above, the Company has continued its efforts to manage its O&M
2 expenses while continuing to provide safe and reliable electric service. In fact and
3 as shown on page 3 of my Exhibit LKW-3, the Company has experienced a \$44
4 million net decrease in O&M since 2019. The CenterPoint Houston witnesses that
5 support the Company's request for recovery of its O&M expenses discuss the cost
6 control measures and budget management used to effectively manage overall
7 expenses.

8 **Q. HOW DOES THE COMPANY PROPOSE TO RECOVER REASONABLE**
9 **RATE CASE EXPENSES?**

10 A. As addressed in the testimony of Company witness Mr. Durland, the Company is
11 including a rate case expense recovery rider ("Rider RCE") to ensure that the
12 Company can recover the reasonable and reimbursable rate case expenses incurred
13 in this proceeding as well as other prior rate proceedings. Company witness Myles
14 Reynolds supports the reasonableness of CenterPoint Houston's rate case expenses
15 eligible for recovery.

16 **Q. IS THE COMPANY ALSO SEEKING RATE RELIEF IN THE**
17 **INCORPORATED AREAS OF CENTERPOINT HOUSTON'S SERVICE**
18 **TERRITORY?**

19 A. Yes. Concurrent with this filing, the Company is filing Statements of Intent and
20 underlying support with each of the cities in CenterPoint Houston's service territory
21 that have retained original jurisdiction. CenterPoint Houston has calculated its
22 proposed rates on a system-wide basis. Accordingly, the proposed rates and tariff
23 changes filed with the cities are identical to the proposed rates and tariff changes

1 filed with the Commission. The Company expects that it will appeal and
2 consolidate with this docket any municipal actions as they occur.

3 **Q. HAVE SOME CITIES SURRENDERED THEIR ORIGINAL**
4 **JURISDICTION TO THE COMMISSION?**

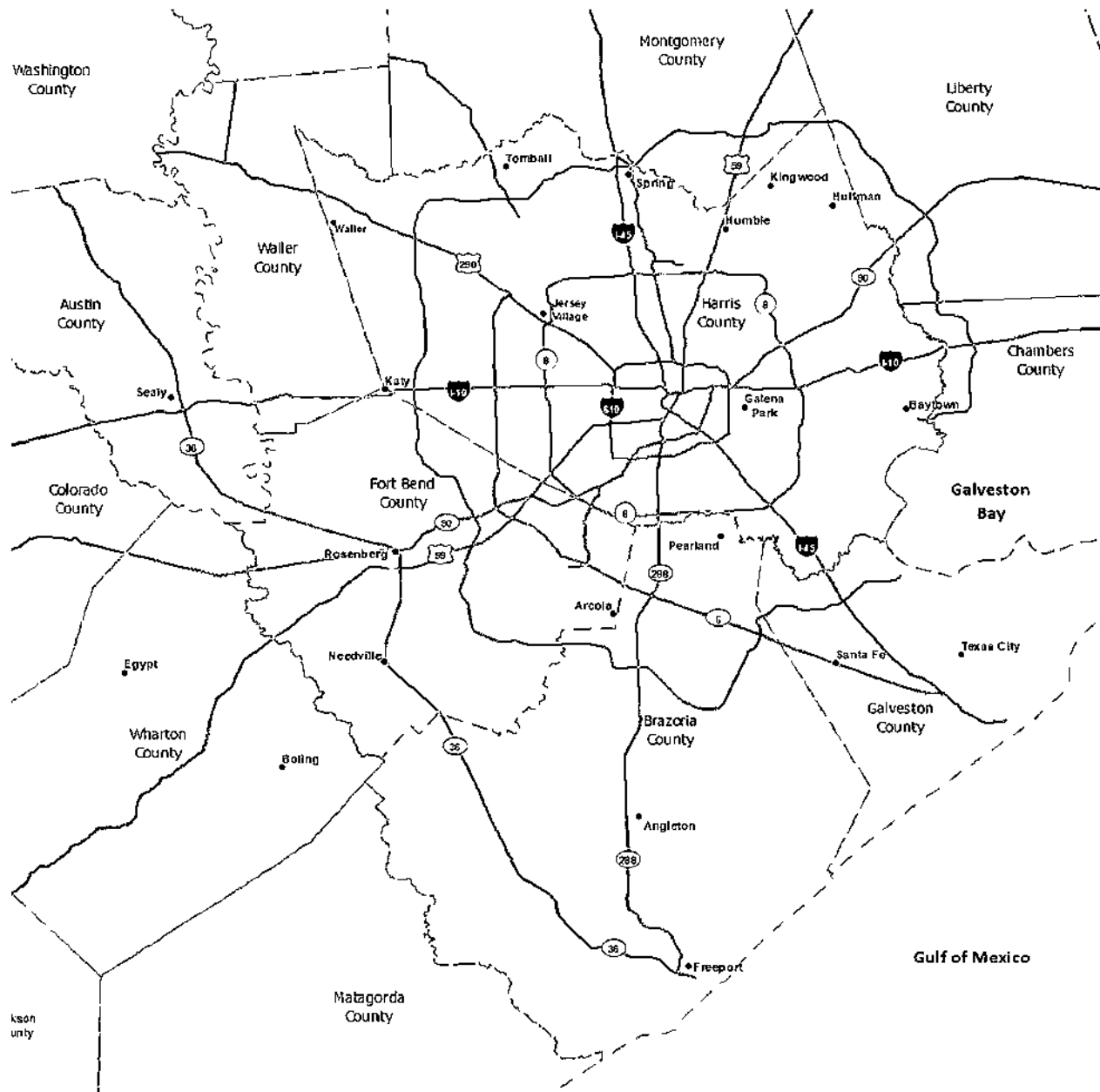
5 A. Yes. Currently, 34 cities have surrendered their original jurisdiction to the
6 Commission. The cities that have surrendered their original jurisdiction to the
7 Commission are identified in Exhibit JRD-9 of Mr. Durland's direct testimony.

8 **IV. CONCLUSION**

9 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

10 A. Yes.

SERVICE AREA



Witness	Subjects Addressed	Volume/Pages
Lynnae K. Wilson	Ms. Wilson provides an overview of the Company's filing, introduces witnesses that support CenterPoint Houston's request, discusses Company values that drive prudent decision making on a daily basis, and describes the Company's capital investment pillars.	Volume 1 / Pages 41-122
Jason M. Ryan	Mr. Ryan provides an overview of the Company's utility operations and investment strategy and major drivers that impact the Company's decision-making.	Volume 1 / Pages 123-234
Eric D. Easton	Mr. Easton describes the Company's Grid Transformation and Investment Strategy Division, how capital investments are prioritized and optimized, the reliability reporting process, and how the addition of a Capital Program Management department will support the efficient execution of capital projects and programs. Mr. Easton also supports the reasonableness and necessity of the divisions O&M expense and capital investment.	Volume 1 / Pages 235-302
David L. Mercado	Mr. Mercado explains the structure and functions of CenterPoint Houston's High Voltage Operations Division, demonstrates the reasonableness of CenterPoint Houston's test-year O&M expenses incurred by the High Voltage Operations Division, and supports the reasonableness and necessity transmission and substation capital investment.	Volume 1 / Pages 303-438
Deryl Tumlinson	Mr. Tumlinson describes the Company's Distribution Operations and Service Delivery Division, supports the reasonableness and necessity of the Company's distribution-related capital costs, and demonstrates the reasonableness of CenterPoint Houston's test-year O&M expenses incurred by the Distribution Operations and Service Delivery Division.	Volume 1 / Pages 439-482

Witness	Subjects Addressed	Volume/Pages
Randal M. Pryor	Mr. Pryor describes the Company's MUG & Distribution Modernization division and the major programs and initiatives that drive distribution investment and expense, supports the reasonableness and necessity of O&M expenses incurred during the test year, and demonstrates the reasonableness and necessity of distribution capital costs during the test year.	Volume 1 / Pages 483-640
Mandie W. Shook	Ms. Shook describes the Company's Electrical Engineering Division, details the processes used to plan, monitor, and control investments and expenditures, and supports the reasonableness and necessity of test-year O&M costs and capital costs incurred by the Electrical Engineering Division.	Volume 1 / Pages 641-676
Rina H. Harris	Ms. Harris explains the Strategic Business Growth & Engagement Division and the Company's efforts to enhance the customer service provided to large customers and supports the reasonableness and necessity of the divisions O&M expenses.	Volume 1 / Pages 677-714
John R. Hudson	Mr. Hudson describes CenterPoint Houston's Market Operations group and supports the reasonableness and necessity of test-year O&M expenses incurred by Market Operations.	Volume 1 / Pages 715-754
Kristie L. Colvin	Ms. Colvin sponsors the books and records of CenterPoint Houston, presents the Company's rate filing package schedules, itemizes and explains all test-year adjustments, supports the Company's overall cost of service and requested revenue requirement, and demonstrates the reasonableness and necessity of Planning and Reporting and certain CenterPoint Energy Service Company, LLC ("Service Company") Executive Management, Finance Organization, and Chief Accounting Organization services to CenterPoint Houston.	Volume 1 / Pages 755-936
L. Darren Storey	Mr. Storey describes Service Company, explains how Service Company, Vectren Utility Holdings, LLC ("VUH"), CenterPoint Energy Resources Corp. ("CERC") control costs, details Service Company, VUH, and CERC methodologies for assigning affiliate costs to CenterPoint Houston, confirms that Service	Volume 2 / Pages 937-1034

Witness	Subjects Addressed	Volume/Pages
	Company, VUH, and CERC corporate support service affiliate costs are reasonable and necessary, and addresses the test year O&M billings from Service Company, VUH, and CERC.	
Jennifer K. Story	Ms. Story presents CenterPoint Houston's testimony related to federal income taxes, supports the Company's request for CenterPoint Energy Service Company, LLC Corporate Tax department test year affiliate expenses, addresses issues related to the appropriate treatment of income taxes, and demonstrates that federal income tax, Texas margin tax, and property tax amounts included in the Company's cost of service are reasonable and necessary.	Volume 2 / Pages 1035-1136
Steven C. Greenley	Mr. Greenley explains the structure and role of the Utility Operations Support provided by Service Company, describes how costs are budgeted, monitored and controlled, and demonstrates the reasonableness and necessity of test-year Utility Operations Support costs assigned to CenterPoint Houston.	Volume 2 / Pages 1137-1174
Ronald W. Bahr	Mr. Bahr explains the structure and services provided by Service Company's Information Technology group and demonstrates the reasonableness and necessity of test-year Information Technology costs assigned to CenterPoint Houston.	Volume 2 / Pages 1175-1212
Shonda Royston-Johnson	Ms. Royston-Johnson explains the structure and services provided by Service Company's Customer Operations organization and demonstrates the reasonableness and necessity of test-year Customer Operations costs assigned to CenterPoint Houston.	Volume 2 / Pages 1213-1242
M. Shane Kimzey	Mr. Kimzey details the services provided by Service Company's Legal Department and demonstrates the reasonableness and necessity of test-year affiliate costs assigned from the Legal Departments to CenterPoint Houston.	Volume 2 / Pages 1243-1268

Witness	Subjects Addressed	Volume/Pages
Brad A. Tutunjian	Mr. Tutunjian describes the Regulatory Services and Government Affairs Department affiliate services provided to the Company and supports the reasonableness of the department's costs assigned to CenterPoint Houston.	Volume 2 / Pages 1269-1290
Stephanie Bundage Juvane	Ms. Bundage Juvane explains the services provided by Service Company's Internal Audit Department and demonstrates the reasonableness and necessity of test-year Internal Audit costs assigned to CenterPoint Houston.	Volume 2 / Pages 1291-1308
Carla A. Kneipp	Ms. Kneipp describes the structure of and services provided by Service Company's Supply Chain organization and supports the reasonableness and necessity of Supply Chain costs incurred by CenterPoint Houston.	Volume 2 / Pages 1309-1378
John Sousa	Mr. Sousa discusses the services provided by Service Company's Corporate Communications, Community Relations, Utility Marketing, and Corporate Security departments and demonstrates the reasonableness and necessity of test-year costs of those departments assigned to CenterPoint Houston.	Volume 2 / Pages 1379-1424
Bertha R. Villatoro	Ms. Villatoro discusses the services provided by Service Company's Human Resources organization, demonstrates the reasonableness and necessity of test-year Human Resources organization costs assigned to CenterPoint Houston, sets forth the Company's compensation philosophy, describes the types of health and welfare benefits provided to CenterPoint Houston employees, explains the Company's retirement-related plans, and supports the Company's expense requests related to postretirement and postemployment benefits.	Volume 2 / Pages 1425-1534
Timothy S. Lyons	Mr. Lyons sponsors CenterPoint Houston's lead-lag study used to determine the Company's cash working capital requirement.	Volume 2/ Pages 1535-1790
Dane A. Watson	Mr. Watson presents an updated depreciation study.	Volume 2 / Pages 1791-1848
Ann E. Bulkley	Ms. Bulkley supports the Company's requests related to return on equity and capital structure.	Volume 3 / Pages 1849-2226

Witness	Subjects Addressed	Volume/Pages
Jacqueline M. Richert	Ms. Richert supports the reasonableness of CenterPoint Houston's requested capital structure, return on equity and overall rate of return, presents the Company's cost of debt, and demonstrates the reasonableness and necessity of test-year Service Company Treasury Department Organization costs assigned to CenterPoint Houston.	Volume 3 / Pages 2227-2338
Gregory S. Wilson	Mr. Wilson supports the need for the Company's self-insurance reserve and the appropriate level of expense to be included in the Company's cost of service.	Volume 3 / Pages 2339-2372
J. Stuart McMenamin	Dr. McMenamin presents methods and data used to develop weather-related adjustments included in the Company's filing.	Volume 3 / Pages 2373-2440
John R. Durland	Mr. Durland presents the Company's proposed allocation of costs to rate classes, rate design, and tariffs, including proposed changes to the Company's retail delivery service tariffs and wholesale transmission tariff.	Volume 3 / Pages 2441-2710 And Volume 4 / Pages 2711-3028
Myles F. Reynolds	Mr. Reynolds supports the Company's request for reimbursement of rate case expenses.	Volume 4 / Pages 3029-3098

The following files are not convertible:

General Instruction 2.xlsx	Exhibit LKW-03 Comparison per Rate Case
since 2018.xlsx	Workpaper LKW 01 Change in customers
since 2018.xlsx	Workpaper LKW 02 change in mileage
customer impact.xlsx	Workpaper LKW 03 and WP LKW 04 RES

Please see the ZIP file for this Filing on the PUC Interchange in order to access these files.

Contact centralrecords@puc.texas.gov if you have any questions.

ABOUT US

Leadership

Our Members

TMC BioBridge

About Us



Texas Medical Center (TMC) — the largest medical complex in the world

MENU

what’s possible.

TMC at a Glance

Home to the **world’s largest children’s hospital & world’s largest cancer hospital**. TMC delivers one baby every 20 minutes, resulting in approximately 26,280 births per calendar year. TMC begins one surgery every three minutes.

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10 million	patient encounters per year
180,000+	annual surgeries
750,000	ER visits per year
9,200	total patient beds
50 million	developed square feet

BACK TO TOP

13,600+

total heart surgeries

billion

in construction projects underway

000+

total employees

largest

business district in the U.S.

ABOUT US

Leadership

Our Members

TMC BioBridge



For the first time in the history of the Texas Medical Center, leaders throughout the TMC community have joined together in a visionary initiative to drive the next generation of life science advancements. Their goal: To become the world leader in health and life sciences by leveraging the collective power of TMC's renowned institutions in a shared, centrally managed environment. The result is a research collaborative unlike anything TMC has ever known or health care has ever seen.

The initiative is a natural extension of TMC's original mission to serve the health, education and research needs of Texas and the world. As health care's largest and most diverse community, TMC is positioned to make a difference in ways no other single institution can. By uniting its unrivaled resources and expertise, the Texas Medical Center can more readily drive the commercialization of breakthrough ideas, expand its reach as a global medical leader and ultimately transform human health.

History

ABOUT US

- Leadership
- Our Members
- TMC BioBridge

98 years ago

THE TEXAS MEDICAL CENTER TOOK THE FIRST STEPS TOWARD BECOMING THE WORLD'S L

1900 1930 1940 1950 1960 1970 1980 1990 2000 2024
O

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Houston, TX 77030
(713)-791-8800 | info@tmc.edu



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TRADE HIGHLIGHTS AND PERFORMANCE DATA

The Houston Ship Channel complex and its more than 200 public and private facilities is the nation's largest port for waterborne tonnage, and an essential economic engine for the Houston region, the state of Texas, and the U.S.



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[DEI At Port Houston](#)

[Employee Benefits](#)

[Internship Program](#)

[Applicant Notices](#)

ECONOMIC IMPACT OF THE HOUSTON SHIP CHANNEL



The Houston Ship Channel complex and its more than 200 private and eight public terminals, collectively known as the Port of Houston, is the nation's largest port for waterborne tonnage and an essential economic engine for the Houston region, the state of Texas, and the U.S. A 2022 study by Martin Associates reports that business activity at the Port of Houston supports **1.54M jobs throughout the state of Texas and 3.37M jobs nationwide**. This activity helps generate more than **\$439B in statewide economic value and \$906B in nationwide economic value**. Moreover, the Houston Ship Channel contributes nearly **\$10.6B in state and local tax revenue and \$62.8B in national tax revenue**.

2022 ECONOMIC REPORT

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STATISTICAL HIGHLIGHTS FOR PORT HOUSTON

- 5th ranked U.S. container port by total TEUs
- Largest Gulf Coast container port, handling 73% of U.S. Gulf Coast container traffic
- Largest Texas port with 97% market share in containers

STATISTICAL HIGHLIGHTS FOR THE HOUSTON SHIP CHANNEL COMPLEX

- 1st ranked U.S. port in foreign waterborne tonnage – 220.5 million short tons (2022)
- 1st ranked U.S. port in total foreign and domestic waterborne tonnage – 266 million short tons (2021)
- 2nd ranked U.S. port in terms of total foreign cargo value (\$240.1 billion) 2022
- Largest Texas port with 38% of market share by tonnage

Sources: USACE Navigation Data Center (facts 1,2), U.S. Dept. of Commerce Bureau of Census, Customs Data from Census Bureau (fact 3), Journal of Commerce PIERS (facts 4 and 5), American Association of Port Authorities (fact 6).

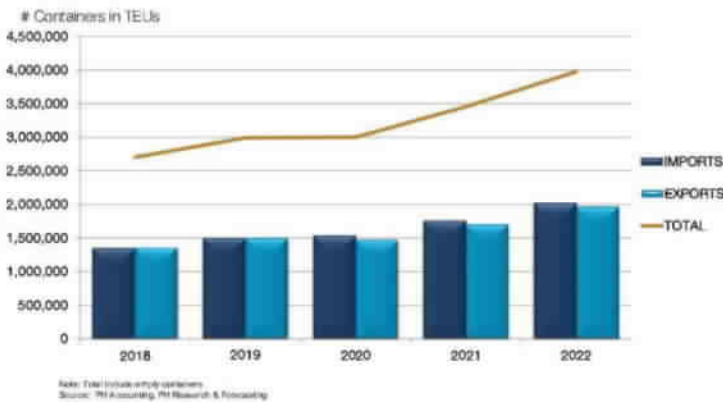
CONTAINER TRADE SHARE

2022



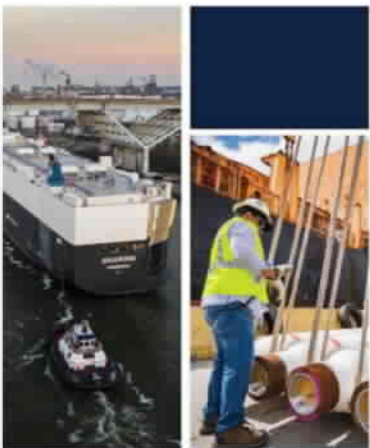
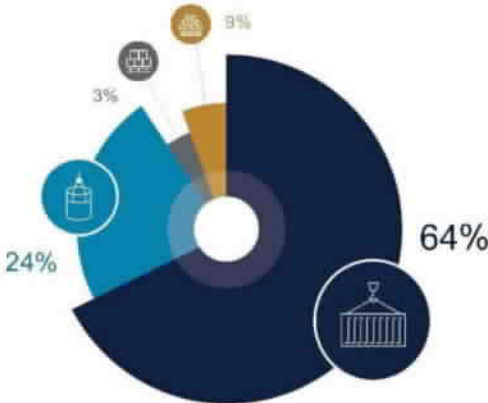
CONSISTENT GROWTH OF CONTAINERS

PORT HOUSTON 2022



PORT HOUSTON








CARGO SECTORS BY TONNAGE 2022



- Containerized
- Bulk Cargo
- General Cargo (Steel)
- General Cargo (Other)



Statistical Data in Depth

- [Monthly Statistics Overview](#) 
- [Container Volume by Trade Statistics \(annual\)](#) 
- [Container Volume by Trade Statistics \(Y.O.Y\)](#) 
- [Container Volume by Country Statistics \(annual\)](#) 
- [Container Volume by Commodity Statistics \(annual\)](#) 
- [Annual Summary of Port Houston Cargo Tonnage Statistics](#) 
- [Detailed Monthly Container Performance Statistics](#) 



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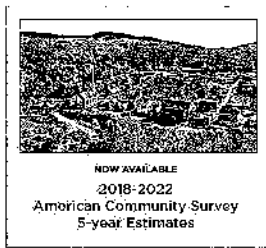
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For Immediate Release: Thursday, March 30, 2023



Growth in the Nation's Largest Counties Rebounds in 2022

[\[newsroom/press-releases/2023/language-at-home-acs-5-year.html\]](#)

March 30, 2023

Press Release Number CB23-52

Counties with large colleges and universities experience population gains once again.

MARCH 30, 2023 — After some of the nation's most populous counties experienced significant outmigration and population declines in 2021, overall patterns of population growth and decline are moving towards pre-pandemic rates for the nation's 3,144 counties according to the U.S. Census Bureau's Vintage 2022 estimates [<https://www.census.gov/data/tables/time-series/demo/popest/2020s-counties-total.html>] of population and components of change released today. All 10 of the top fastest-growing counties were in the South or West.

"The migration and growth patterns for counties edged closer to pre-pandemic levels this year," said Dr. Christine Hartley, assistant division chief for estimates and projections in the Census Bureau's population division. "Some urban counties, such as Dallas and San Francisco, saw domestic outmigration at a slower pace between 2021 and 2022, compared to the prior year. Meanwhile, many counties with large universities saw their populations fully rebound this year as students returned."

Whitman County, Washington, home to Washington State University, saw its population drop by 9.6% between 2020 and 2021 but then grow by 10.1% last year—the most of any county above 20,000 in population. Whitman County's change is just one example of the many college counties that saw a rebound in the last year after a lull during the COVID-19 pandemic.



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Related Information

- [\[newsroom/press-releases/2023/pop-estimates-county.html\]](#)

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This is similar to the pattern observed by many metropolitan counties in the South and West, where many impacts experienced during the pandemic are either reverting to near pre-pandemic levels or making a full recovery. For example, Dallas County, Texas, the eighth most populous county in the U.S. in 2022, lost over 22,000 (-0.8%) people between 2020 and 2021, but between 2021 and 2022 gained nearly 13,000 (0.5%) people—the fastest gains the county has seen since 2017.

Counties

As of July 1, 2022, just under one-half (48.7%) of counties were under 25,000 in total resident population, while 19.5% of counties had a population of 100,000 or more. Only 47 (1.5%) counties had a population of 1 million or more.

Population Size of Counties on July 1, 2022

Size group	Number (percent)
100,000 or higher	613 (19.5%)
50,000 to 99,999	385 (12.2%)
25,000 to 49,999	615 (19.6%)
10,000 to 24,999	793 (25.2%)
Under 10,000	738 (23.5%)

Source: U.S. Census Bureau, Vintage 2022 Population Estimates

Population Change

Over one-half of all counties (52.5%) grew between 2021 and 2022, down from 55.7% of counties the prior year. At the same time, 1,482 (47.1%) declined and 11 counties (0.3%) saw no change in population.

The smallest counties nationally, those with populations below 10,000, experienced more population loss (60.8%) than gains (38.3%); while the largest counties, having populations at or greater than 100,000, largely experienced population increases (68%).

Population Change in Counties: 2021 to 2022

Size group	Gain	No change	Loss
100,000 or higher	417 (66.0%)	0 (0.0%)	196 (32.0%)
50,000 to 99,999	242 (62.9%)	1 (0.3%)	142 (36.9%)
25,000 to 49,999	335 (54.5%)	0 (0.0%)	280 (45.5%)
10,000 to 24,999	374 (47.2%)	4 (0.5%)	415 (52.3%)
Under 10,000	283 (38.3%)	6 (0.8%)	449 (60.8%)

Source: U.S. Census Bureau, Vintage 2022 Population Estimates

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Fastest Growing

Whitman County, Washington, was the fastest-growing county between 2021 and 2022.

- One-half of the top 10 fastest-growing counties were in Texas: Kaufman County (8.9%), Rockwall County (5.7%), Parker County (5.6%), Comal County (5.6%) and Chambers County (5.3%).
- The remaining fastest-growing counties were in Florida (Sumter County, 7.5%), Georgia (Dawson and Lumpkin Counties, both with 5.8%), and North Carolina (Brunswick County, 5.7%).

Largest Gaining

Maricopa County, Arizona, remained the largest-gaining county in the nation, adding 56,831 residents in 2022, a gain of 1.3% since 2021. Domestic migration was the component of population change (i.e., births, deaths and migration), which made the largest contribution to Maricopa County's growth. Harris County, Texas, had the second-largest gain last year, up 45,626. Texas was home to 6 of the top 10 largest-gaining counties in 2022. Harris, Collin, Denton, Fort Bend, Bexar and Montgomery Counties gained a combined 209,182 residents. Three Florida counties (Polk, Lee and Hillsborough) also were among the largest gaining in 2022, collectively adding 92,848 residents.

Largest Declining

Los Angeles County, California, had the largest population decline in 2022, decreasing by 90,704, continuing a downward trend as the state lost roughly twice that amount (180,394) in 2021. Population declines lessened for some other urban counties that had seen considerable net domestic outmigration and population decline in 2021. New York County, New York, which had a population decline of 98,505 in 2021 due largely to net domestic outmigration, had population growth of 17,472 this past year. Collectively, this year's 10 counties with the largest population declines lost 378,177 people, down significantly when compared to last year's collective drop of 709,775 for that year's 10 counties with the largest population declines.

Most Populous

Los Angeles County, California, (9,721,138) and Cook County, Illinois, (5,109,292) remain the two most populous counties in the nation. Reflecting longstanding regional population shifts, the nation's most populous counties are increasingly located in the South and West. In 2022, 63 of the country's 100 most populous counties were located in the South and West, up from 61 in the prior year. This is compared to 2010, when 58 of the country's largest counties were in the South and West. The South and West had 51 of the largest counties in 1990 and 50 in 1980.

Components of Change

Domestic Migration

Patterns of domestic migration in 2022 were notably different than 2021. During the height of the pandemic, many small counties experienced higher levels of domestic migration, while many large counties saw lower levels of domestic migration. This pattern has reversed between 2021 and 2022, where many of the small counties that experienced increases in domestic migration saw that pattern slow down. In the meantime, many large counties, particularly in the South and West, observed an uptick in domestic migration.

Sixty percent of U.S. counties had positive net domestic migration in 2022 compared to 63.3 in 2021. All counties in Delaware, Maine and New Hampshire had positive net domestic migration. The two counties with the highest amounts of net domestic migration were Maricopa County, Arizona, (33,305) and Collin County, Texas, (29,696). There were seven states where 75% of counties experienced negative net domestic migration, with Illinois having the largest percentage (89%) of its counties lose residents via domestic migration. The counties with the highest negative net domestic migration were Los Angeles County, California, (-142,953) and Cook County, Illinois, (-94,344).

While several large counties, such as Los Angeles County, California, lost a large number of people through domestic migration in the last year, changes in patterns in domestic migration between 2021 and 2022 meant they lost fewer people compared to the year before. Los Angeles County lost 142,953 people via net domestic migration between 2021 and 2022, compared to 2020 to 2021 when it lost 194,804 people due to net domestic migration.

New York County (Manhattan), New York, had a slight net domestic migration of 2,908 this year, a sharp turnaround from net domestic outmigration of -98,566 the prior year.

San Francisco County, California, had net domestic outmigration of -9,421 in 2022, compared to -57,611 the prior year.

Finally, King County, Washington, (home to Seattle) had net domestic outmigration of -16,035 in 2022, compared to -37,655 in 2021.

Net International Migration

Net international migration patterns for counties remained relatively the same in 2022 as in 2021, with 2,462 counties (78%) seeing positive net international migration. However, with the rebound in net international migration for the nation, the levels for counties were often considerably higher than the prior year. For

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instance, net international migration in Miami-Dade County, Florida, the top ranked county for net international migration in 2022, increased from 15,108 between 2020 and 2021, to over double that (39,170) the following year. Similarly, in second-ranked Harris County, Texas, net international migration more than doubled in size – 13,919 between 2020 and 2021, it grew to 37,268 between 2021 and 2022.

Natural Decrease and Increase

In 2022, 2,336 (74.3) counties had natural decrease (more deaths than births), compared to 2,368 in 2021. The incidence of natural decrease remains historically high. Natural decrease counties are found nationwide but are especially prevalent in some states. While Maine was the only state where all counties experienced natural decrease, West Virginia also had a high frequency of natural decrease – with deaths outnumbering births in 54 of 55 of its counties. Seven of the 10 counties with the highest amount of natural decrease were in Florida, with Pinellas County topping the list with -6,468.

Natural increase (births exceeding deaths) occurred in 791 counties (25.2%) last year. Five of the top 10 counties in natural increase were in Texas, with Harris County having the highest in the nation (30,117).

Puerto Rico Municipios

Puerto Rico's population continues to decline, with all 78 municipios experiencing population loss in 2022. The drop in population is largely a result of natural decrease, as all municipios had more deaths than births and negative net migration.

San Juan had the largest numeric difference as its population decreased by 4,559 or 1.3%. San Juan also had the highest natural decrease at -1,935, followed by Bayamón (-913) and Ponce (-704). Rincón was the only municipio with positive net migration (84) in 2022. Municipios with the largest net migration losses were San Juan (-2,624), Ponce (-1,912), and Bayamón (-1,470).

Metro/Micro Data

The release of Vintage 2022 population estimates for metropolitan and micropolitan statistical areas has been postponed from March to May to facilitate the transition from counties to planning regions in Connecticut [<https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2020-2022/2022-est-relnotes.pdf>]. This forthcoming data release will be limited to total population and will not include the

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components of change. The delay and change to product availability is only expected to affect Vintage 2022 estimates.

For upcoming Vintage 2022 population estimates releases, see the schedule [<https://www.census.gov/programs-surveys/popest/about/schedule.html>] on the population estimates webpage.

###

Tables

Table 1: Top 10 Most Populous Counties – 2022

Top 10 Most Populous Counties: 2022					
Rank	State	County	April 1, 2020 (Estimates Base)	July 1, 2021	July 1, 2022
1	California	Los Angeles County	10,014,042	9,811,842	9,721,138
2	Illinois	Cook County	5,275,522	5,177,606	5,109,292
3	Texas	Harris County	4,731,129	4,735,287	4,780,913
4	Arizona	Maricopa County	4,420,574	4,494,693	4,551,524
5	California	San Diego County	3,298,635	3,274,954	3,276,208
6	California	Orange County	3,186,979	3,161,005	3,151,184
7	Florida	Miami-Dade County	2,701,762	2,670,421	2,673,837
8	Texas	Dallas County	2,611,491	2,587,954	2,600,840
9	New York	Kings County	2,736,075	2,637,486	2,590,516
10	California	Riverside County	2,418,177	2,453,178	2,473,902

Source: U.S. Census Bureau, Vintage 2022 Population Estimates

Table 2: Top 10 Counties in Numeric Growth (Annual)

Top 10 Counties in Numeric Growth, 2021 to 2022

Rank	State	County	April 1, 2020 (Estimates Base)	July 1, 2021	July 1, 2022	Numeric Growth
1	Arizona	Maricopa County	4,420,574	4,494,693	4,551,524	56,831
2	Texas	Harris County	4,731,129	4,735,287	4,780,913	45,626
3	Texas	Gollin County	1,066,465	1,114,450	1,158,696	44,246
4	Texas	Denton County	906,405	943,857	977,281	33,424
5	Florida	Polk County	725,041	755,179	787,404	32,225
6	Florida	Lee County	760,820	790,676	822,453	31,777
7	Texas	Fort Bend County	822,779	860,124	889,146	29,022
8	Florida	Hillsborough County	1,459,773	1,484,455	1,513,301	28,846
9	Texas	Bexar County	2,009,322	2,030,895	2,059,530	28,635
10	Texas	Montgomery County	620,451	650,261	678,490	28,229

Source: U.S. Census Bureau, Vintage 2022 Population Estimates

**Table 3: Top 10 Counties in Percent Growth
(Annual)**

Top 10 Counties in Percent Growth, 2021 to 2022

Resident Population of 20,000 or more in 2021 and 2022						
Rank	State	County	April 1, 2020 (Estimates Base)	July 1, 2021	July 1, 2022	Percent Growth
1	Washington	Whitman County	47,971	43,238	47,619	10.1%
2	Texas	Kaufman County	145,303	158,216	172,366	8.9%
3	Florida	Sumter County	129,751	134,867	144,970	7.5%
4	Georgia	Dawson County	26,796	28,475	30,138	5.8%
5	Georgia	Lumpkin County	33,487	32,890	34,796	5.8%
6	Texas	Rockwall County	107,832	116,549	123,208	5.7%
7	North Carolina	Brunswick County	136,694	144,814	153,064	5.7%
8	Texas	Parker County	148,228	156,966	165,834	5.6%
9	Texas	Gomel County	161,482	174,891	184,642	5.6%
10	Texas	Chambers County	46,571	48,721	51,288	5.3%

Source: U.S. Census Bureau, Vintage 2022 Population Estimates

**Table 4: Top 10 Counties in Numeric Decline
(Annual)**

Top 10 Counties in Numeric Decline, 2021 to 2022

Rank	State	County	April 1, 2020 (Estimates Base)	July 1, 2021	July 1, 2022	Numeric Decline
1	California	Los Angeles County	10,014,042	9,811,842	9,721,138	-90,704
2	Illinois	Cook County	5,275,522	5,177,606	5,109,292	-66,314
3	New York	Queens County	2,405,464	2,328,141	2,278,029	-50,112
4	New York	Kings County	2,736,075	2,637,486	2,590,516	-46,970
5	New York	Bronx County	1,472,656	1,421,089	1,379,946	-41,143
6	Pennsylvania	Philadelphia County	1,603,799	1,589,480	1,567,258	-22,222
7	Michigan	Wayne County	1,793,549	1,773,073	1,757,043	-16,030
8	California	Santa Clara County	1,936,274	1,886,595	1,870,945	-15,650
9	California	Alameda County	1,682,331	1,643,837	1,628,997	-14,840
10	Pennsylvania	Allegheny County	1,250,585	1,245,445	1,233,253	-12,192

Source: U.S. Census Bureau, Vintage 2022 Population Estimates

**Table 5: Top 10 Counties in Percent Decline
(Annual)**

Top 10 Counties in Percent Decline, 2021 to 2022

Resident Population of 20,000 or more in 2021 and 2022						
Rank	State	County	April 1, 2020 (Estimates Base)	July 1, 2021	July 1, 2022	Percent Decline
1	California	Lassen County	32,730	31,813	29,904	-6.0%
2	Louisiana	St. John the Baptist Parish	42,477	42,021	39,864	-5.1%
3	Louisiana	Terrebonne Parish	109,583	109,013	104,786	-3.9%
4	Louisiana	Plaquemines Parish	23,515	23,284	22,516	-3.3%
5	Florida	Baker County	28,263	28,673	27,803	-3.0%
6	Mississippi	Leflore County	28,348	27,398	26,570	-3.0%
7	New York	Bronx County	1,472,656	1,421,089	1,379,946	-2.9%
8	Louisiana	St. Charles Parish	52,548	52,405	50,998	-2.7%
9	Mississippi	Bolivar County	30,973	30,180	29,370	-2.7%
10	Florida	Bradford County	28,306	28,050	27,313	-2.6%

Source: U.S. Census Bureau, Vintage 2022 Population Estimates

THE ECONOMY AT A GLANCE

HOUSTON



GREATER HOUSTON
PARTNERSHIP
Making Houston Greater

A publication of the Greater Houston Partnership

Volume 31 Number 4 – April 2023

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POPULATION GROWTH SURGES

Metro Houston added nearly 125,000 residents in '22, ranking second among the nation's major metros in population growth, according to the Partnership's analysis of U.S. Census Bureau data. That's up from '21 when the lingering effects of COVID limited the region's gains to just over 75,000. '21 was the second weakest year for population growth of the past 20 years while '22 was slightly above the long-term average of 119,000 per year.

POPULATION GAINS, '03 – '22 METRO HOUSTON

Year	000s	Year	000s
'03	100.0	'13	144.7
'04	96.9	'14	172.0
'05	101.4	'15	171.7
'06	190.0	'16	134.7
'07	108.8	'17	93.6
'08	127.1	'18	76.1
'09	144.5	'19	90.0
'10	171.8	'20	74.6
'11	108.8	'21	75.1
'12	127.1	'22	124.3

Note: Population gains are for the 12 months ending July 1 each year.
Source: U.S. Census Bureau

The surge in population helps to explain last year's robust job growth, strong demand for housing, and increased congestion on the region's roads and freeways. Houston added 176,000 jobs, closed on 108,000 single-family homes, absorbed 21,000 apartment units, and delivered 280,000 new vehicles over period covered by the Census data, *i.e.*, the 12 months ending July 1, 2022.

Houston performed exceptionally well last year considering nine of the nation's 20 largest metros shed population and five added fewer than 20,000 residents. At current growth rates, the rankings of the 10 most populous metros are unlikely to shift anytime soon. Houston has a lock on fifth place, is unlikely to catch Dallas-Fort Worth, and is in little danger of losing ground to Washington, DC.

NET GAINS/LOSSES, MOST POPULOUS U.S. METROS

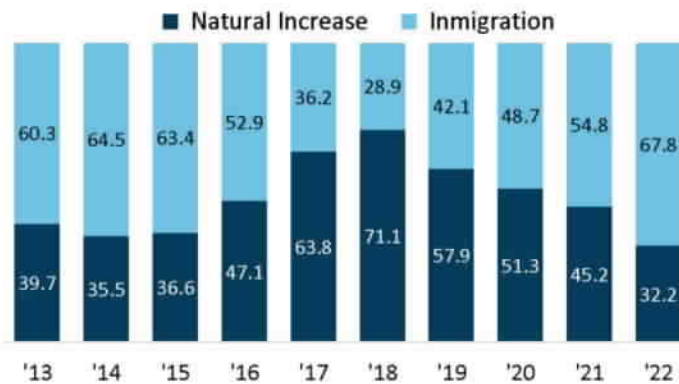
Rank	Metro	Population as of 7/1/22	Change, '21 - '22 #	%
1	New York	19,617,869	-156,517	-0.8
2	Los Angeles	12,872,322	-100,525	-0.8
3	Chicago	9,441,957	-77,581	-0.8
4	Dallas-Fort Worth	7,943,685	170,396	2.2
5	Houston	7,340,118	124,281	1.7
6	Washington	6,373,756	8,849	0.1
7	Philadelphia	6,241,164	-12,156	-0.2
8	Atlanta	6,222,106	78,968	1.3
9	Miami	6,139,340	29,967	0.5
10	Phoenix	5,015,678	72,841	1.5
11	Boston	4,900,550	-3,158	-0.1
12	Riverside	4,667,558	21,498	0.5
13	San Francisco	4,579,599	-37,011	-0.8
14	Detroit	4,345,761	-20,935	-0.5
15	Seattle	4,034,248	17,974	0.4
16	Minneapolis	3,693,729	2,742	0.1
17	Tampa	3,290,730	61,653	1.9
18	San Diego	3,276,208	1,254	0.0
19	Denver	2,985,871	8,038	0.3
20	Baltimore	2,835,672	-7,682	-0.3

Source: Partnership calculations based in U.S. Census Bureau data

A common misconception is that Houston's #2 ranking represents 125,000 residents moving to the region. The gains came from two sources: the natural rate of increase and net immigration. The *natural increase* reflects the number of births minus deaths in the region. *Net immigration* reflects the number of people who moved into Houston minus those who moved out.

Two-thirds of Houston's population gains in '22 came from net immigration, one-third from the natural increase. The ratio frequently shifts, with immigration accounting for a larger share of population growth when the region's economy booms and a smaller share when it struggles.

SHARE OF METRO POPULATION GAINS OVER TIME (%)



Source: Partnership calculations based in U.S. Census Bureau data

Net Immigration

Metro Houston ranked second in net immigration in '22. Twelve of the nation's 20 largest metros had negative immigration, *i.e.*, more residents moved out than moved into those regions. Chicago, Los Angeles, New York, San Francisco, and St. Louis lost a combined 600,000 residents to outmigration last year. If not for births exceeding deaths in these metros, their overall population losses would have been even greater.

'22 NET MIGRATION, DOMESTIC + INTERNATIONAL 20 Most Populous Metros

Metro	Gain/Loss	Metro	Gain/Loss
Dallas/Ft. Worth	128,239	Minneapolis	-9,550
Houston	85,044	San Diego	-9,604
Tampa	67,504	Boston	-12,030
Phoenix	63,826	Philadelphia	-13,507
Atlanta	59,443	Detroit	-16,257
Miami	30,398	San Francisco	-51,617
Riverside	9,039	Chicago	-91,286
Seattle	6,918	St. Louis	-116,581
Denver	-1,270	Los Angeles	-125,592
Washington, DC	-8,091	New York	-222,048

Source: Partnership calculations based in U.S. Census Bureau data

Net migration has two components, *domestic* and *international*. Domestic reflects the population moving from within the United States while international reflects the population relocating from abroad. International migration includes ex-pat workers called home from

overseas, foreign workers assigned to multinational companies in Houston, military personnel redeployed stateside, international students enrolling at local universities, temporary workers on H1-B and H2-B visas, refugees placed in the city by relief agencies, and immigrants (documented and undocumented) who left their homelands for better lives in America.

Houston ranked third in the nation for international migration last year, behind New York and Miami. All 20 of the nation's most populous metros benefitted from international migration.

'22 INTERNATIONAL MIGRATION 20 Most Populous Metros

Metro	Gain	Metro	Gain
New York	99,677	Washington, DC	25,561
Miami	67,130	Atlanta	22,033
Houston	47,473	Philadelphia	16,704
Los Angeles	44,858	Phoenix	16,293
Dallas	38,505	Tampa	12,752
St. Louis	36,203	Detroit	11,401
Boston	35,286	Minneapolis	10,214
Seattle	29,759	San Diego	9,043
San Francisco	27,522	Denver	6,911
Chicago	26,711	Riverside	4,576

Source: Partnership calculations based in U.S. Census Bureau data

International migration accounted for over half (55.8 percent) of Houston's net migration last year and well over one-third (38.2 percent) of the region's overall gains. The flow of foreign-born residents and workers into the region remains essential for the region's growth.

According to the Census 2021 *American Community Survey* (the latest detailed demographics available):

- 24.1 percent of the metro Houston population is foreign-born.
- 30.7 percent of the metro workforce was born outside the U.S.
- Unemployment for Houston's foreign-born averaged 4.3 percent in '21 vs. 5.1 percent for the native-born.
- A '19 study by the Partnership found the output of foreign-born workers accounted for 30.8 percent of the region's gross domestic product.

Natural Increase

Metro Houston ranked third in natural increase, behind New York and Dallas. The region logged approximately 93,000 births and 53,000 deaths over the 12 months ending July 1, 2022. Births have trended down since the middle of the last decade while deaths have trended up.

Several factors account for the drop in births—fewer teen pregnancies, couples waiting longer to marry, women postponing childbirth, women deciding not to have children, and families having fewer children. The number of deaths has also trended up since early in the last decade as the population ages. Last year saw the second-highest number of deaths, a result of the pandemic. Three metros among the top 20, Detroit, St. Louis, and Tampa, recorded negative natural increases.

'22 NET NATURAL INCREASE 20 Most Populous Metros

Metro	Gain/Loss	Metro	Gain/Loss
New York	58,745	Minneapolis	12,602
Dallas	40,679	Chicago	12,485
Houston	39,983	Denver	10,239
Los Angeles	25,658	Boston	8,921
Wash, DC	21,091	Phoenix	7,990
Atlanta	20,415	Philadelphia	3,085
San Francisco	13,732	Miami	723
Riverside	13,628	St. Louis	-2,714
Seattle	13,466	Detroit	-4,020
San Diego	12,696	Tampa	-7,711

Source: Partnership calculations based in U.S. Census Bureau data

A Closer Look at Houston

All nine counties in the metro Houston area gained residents in '21. How and where that growth occurred varied, however.

- Ten years ago, Harris County reaped roughly two-thirds of the region's annual population gains. In '22, it accounted for slightly over one-third (36.7 percent).
- Population continues shifting to Montgomery and Fort Bend Counties, the two capturing 39.5 and 30.9 percent respectively of the region's net domestic migration in '22.
- Domestic migration was negative for Harris County last year, a trend that began nearly a decade ago. Since '16, Harris County has lost over 220,000 residents to outmigration.
- If not for international migration, overall migration into Harris County would be negative. Four out of every five international migrants to the metro Houston area in '22 settled in the county.
- Harris also had the highest natural increase, accounting for three out of every four births in the region.
- COVID deaths continue to weigh on growth. The 53,694 estimated for '22 was down from the 55,935 recorded in '21 but well above the 43,699 recorded in '19 prior to the pandemic.

MAJOR COMPONENTS OF METRO HOUSTON POPULATION GROWTH, 7/1/21 TO 7/1/22

County	Net Change	Natural Increase	Net Migration
Austin	676	19	651
Brazoria	9,323	1,486	7,715
Chambers	2,567	180	2,319
Fort Bend	29,022	4,407	24,454
Galveston	1,808	395	1,566
Harris	45,626	30,117	17,262
Liberty	4,610	288	4,253
Montgomery	28,229	2,846	24,734
Waller	2,420	245	2,090
Total	124,281	39,983	85,044

Note: Columns and rows may not sum evenly due to rounding.

Source: Partnership calculations based in U.S. Census Bureau data

SUBCOMPONENTS OF METRO HOUSTON POPULATION GROWTH, 7/1/21 TO 7/1/22

County	Natural Increase		Immigration	
	Births	Deaths	International	Domestic
Austin	364	345	15	636
Brazoria	4,705	3,219	849	6,866
Chambers	582	402	71	2,248
Fort Bend	9,180	4,773	6,678	17,776
Galveston	3,963	3,568	480	1,086
Harris	64,873	34,756	37,268	-20,006
Liberty	1,340	1,052	54	4,199
Montgomery	7,940	5,094	1,978	22,756
Waller	730	485	80	2,010
Totals	93,677	53,694	47,473	37,571

Note: Columns and rows may not sum evenly due to rounding.

Source: Partnership calculations based in U.S. Census Bureau data

A Look Elsewhere

Texas led the nation in population growth last year. Florida ranked second, North Carolina, third. Eighteen states shed population, with New York, California, and Illinois suffering the greatest losses.

BIGGEST GAINS AND LOSSES, STATE POPULATION, '22

State	Biggest Gains	State	Biggest Losses
Texas	470,708	New York	-180,341
Florida	416,754	California	-113,649
North Carolina	133,088	Illinois	-104,437
Georgia	124,847	Pennsylvania	-40,051
Arizona	94,320	Louisiana	-36,857

Note: State data is for the calendar year.

Source: Partnership calculations based in U.S. Census Bureau data

Twenty-two of Texas' 25 metro areas added population in '22, DFW gaining the most residents (170,396) and El Paso increasing at the fastest rate (4.5 percent).

**POPULATION GROWTH
TEXAS METROS WITH +250,000 RESIDENTS**

Metro	Population as of 7/1/22	Change, '21 - '22 #	%
Dallas-Ft Worth	7,943,685	170,396	+2.2
Houston	7,340,118	124,281	+1.7
San Antonio	2,655,342	50,411	+1.9
Austin	2,421,115	62,985	+2.7
McAllen	888,367	7,734	+0.9
Killeen	496,228	9,368	+1.9
Brownsville	425,208	2,084	+0.5
Corpus Christi	421,628	-1,303	-0.3
Beaumont	393,575	-1,641	-0.4
Lubbock	328,283	2,949	+0.9
Longview	291,219	2,831	+1.0
Waco	283,885	3,072	+1.1
College Station	277,824	5,183	+1.9
Amarillo	271,171	1,318	+0.5
Laredo	267,780	147	+0.1

Source: Partnership calculations based in U.S. Census Bureau data

CORPORATE RELOCATIONS AND EXPANSIONS

Metro Houston ranked third among the nation's top metros for new and expanded facilities in '22, according to *Site Selection* magazine, which produced the rankings as part of the annual "Governor's Cup" competition. The Houston region logged 255 announcements. The state of Texas, with 1,028 projects, earned the top spot in the magazine's state rankings.

'22 TOP METROS BY NUMBER OF PROJECTS

Rank	Metro	Projects
1	Chicago	448
2	Dallas-Fort Worth	426
3	Houston	255
4	New York	246
5	Los Angeles	150
6	Atlanta	141
7	Austin	132
8	Boston	122
9	Cincinnati	112
10	Washington, DC	103

Source: Site Selection Magazine

Site Selection's rankings focused on new projects with significant impact, including headquarters, manufacturing plants, R&D operations, and logistics sites. Retail, government, school, and hospital projects are not included. Projects included in the analyses meet at least one of three criteria: (a) involved a capital investment of at least \$1 million, (b) created at least 20 new jobs, or (c) added at least 20,000 sq. ft. of space.

FEBRUARY EMPLOYMENT

In late March, TWC released its February estimates for metro Houston employment. The region created 29,200 jobs that month, well above the long-term average of 22,100 for February.

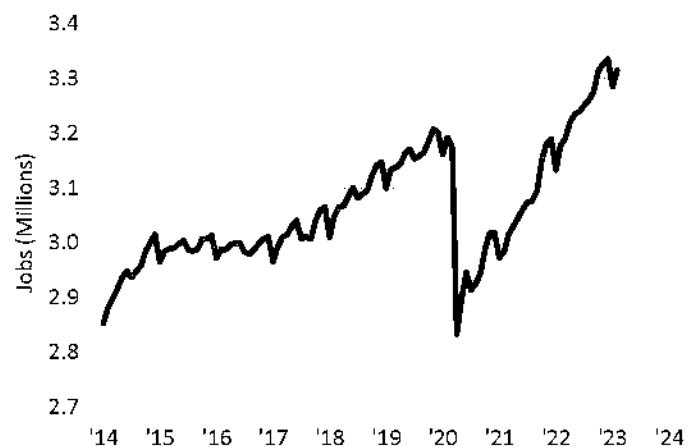
Sectors with the largest employment gains included local education (+8,200 jobs), administrative and support services (+7,400), health care and social assistance (+4,900), restaurants and bars (+2,900), and private education (+2,800).

Sectors with the greatest losses included retail (-2,400 jobs), manufacturing (-1,400), specialty trade contractors (-500), and nondurable goods wholesalers (-600).

Houston shed 50,200 jobs in January. Over-the-month losses of that magnitude are typical in January as workers hired for the holiday season are laid off and the Bureau of Labor Statistics adjusts its employment databases.

February's gains offset 60 percent of January's losses. If job growth over the next two months matches long-term averages, the region should recover all January's losses by April.

METRO HOUSTON PAYROLL EMPLOYMENT



Source: Texas Workforce Commission

'22 BENCHMARK REVISIONS

Houston created 145,700 jobs in '22, according to the benchmark revisions released mid-March by TWC. The agency, which surveys employers throughout the year, originally estimated 179,000 jobs for '22. The revisions included minor adjustments to employment in '19, '20, and '21 but none to prior years.

METRO HOUSTON BENCHMARK REVISIONS

Year	December to December Employment Estimates		
	Pre-Revision	Post-Revision	Change
'22	179,000	145,700	-33,300
'21	159,700	172,100	+12,400
'20	-185,000	183,900	-1,100
'19	54,400	54,500	+100
'18	82,800	82,800	0

Source: Partnership calculations based on Texas Workforce Commission data.

The revisions shifted '22 from being the best year on record for job growth to being the second best. '21 now holds that record. The revisions had no impact on the COVID recovery timeline, though. Houston returned to pre-pandemic employment levels in May '22, twenty-five months after shedding nearly 360,000 jobs in March and April of '20.

The adjustments came from the annual benchmark revisions, a review that TWC starts each fall, culminating with the release of updated employment data in March. The job reports that TWC releases throughout the year are based on a sample of area employers. The revised job counts are based on unemployment insurance premiums paid by employers, and therefore provide a more accurate picture of job growth or losses.

All major sectors added jobs in '22. A handful of sub-sectors shed jobs: general merchandise stores (-2,400), employment services (-2,100), and personal and health product stores (-700).

TWC revised employment in restaurants and bars downward by 25,300 jobs. The net gain of 16,800 jobs last year is more in line with the long-term average for the sector.

Construction's gains were halved, from 18,8000 to 9,400 jobs. The job growth originally reported was unrealistic given rising interest rates, falling home sales, and the late-year slowdown in new contract awards.

The other services sector includes barber shops, beauty salons, auto repair, and the like. Rather than cutting 200 jobs as first reported the sector added 2,600. This suggests the prospects for small businesses have improved significantly post-pandemic.

Oil field services added 2,200 more jobs than originally thought but oil and gas extraction 2,900 fewer. The former reflects the gradual ramp up in drilling activity last year, the latter that the industry has learned to manage operations with significantly fewer employees.

Local and state education saw a net gain of 9,000 jobs, up from 5,100 pre-benchmark. More educators are on campus teaching the area's growing school-age population.

Arts, entertainment, and recreation added only 1,700 jobs, down from the 7,000 first reported. Despite the setback, employment in the sector is marginally above where it stood prior to the pandemic.

The commission overestimated growth in wholesale trade by 5,900 jobs and retail trade by 4,900.

Employment services, which includes temporary help and contract workers, rather than being flat as first reported lost 2,200 jobs. The sector is typically among the first to add jobs in the expanding economy and the first to let employees go in the early stages of a downturn. It's unclear whether the sector is signaling that a recession is imminent or if these workers are being hired away by other employers.

'22 JOB GAINS, SELECTED SECTORS, METRO HOUSTON

Sector	Job Gains
Prof, Sci, and Tech Services	23,700
Restaurants and Bars	14,400
Health Care and Social Assistance	13,700
Manufacturing	12,000
Transportation and Warehousing	8,600
Construction	9,400
Wholesale Trade	8,500
Finance and Insurance	6,000
Local Educational Services	5,500
Oilfield Services	5,500
Private Educational Services	5,500
State Educational Services	3,500
Real Estate and Equipment Leasing	3,400
Retail Trade	3,100
Other Services	2,600
Hotels	2,400
Information	1,900
Arts, Entertainment, Recreation	1,700
Utilities	1,600
Oil and Gas Extraction	300

* Post benchmark revisions

Source: Partnership calculations based on Texas Workforce Commission data.

KEY ECONOMIC INDICATORS

Clicking on the hyperlinks provides additional details for each indicator.



Aviation — The Houston Airport System (HAS) handled 3.9 million passengers in February '23, up 11.7 percent from 3.6 million in February '22.



Construction — '23 started with a significant drop off in construction activity. Dodge Data & Analytics reports \$4.1 billion in contracts were awarded in the first two months of '23, down 30.8 percent from the \$5.2 billion issued over the comparable period in '22. Adjusted for inflation, this is the weakest start to the year of the past five years.



Crude Oil — The closing spot price for West Texas Intermediate (WTI), the U.S. benchmark for light, sweet crude, averaged \$76.83 per barrel in February '23, down from \$91.64 for the same period in '22. The U.S. Energy Information Administration forecasts WTI to average \$77.10 per barrel in '23.



Foreign Trade — Houston area ports handled 19.3 million metric tons of goods and commodities in January this year, a 3.7 percent decrease over the comparable period in '22. Those shipments were valued at \$23.3 billion, a 23.3 percent increase over '22. This year-over-year increase was driven by increased shipments of mineral fuels, oil, and refined products; plastics; and industrial machinery.



Home Sales — In the 12 months ending February '23, Houston area realtors closed on 112,817 homes, compared to 115,197 for the 12 months ending in January and 117,681 for the 12 months ending in December. In February '23, active listings of all property types (single-family, townhomes, condos, duplexes) were up 60.6 percent over February of '22. They are still 14.0 percent below pre-pandemic.



Inflation — Inflation, as measured by the Consumer Price Index for all Urban Consumers (CPI-U), rose 6.0 percent nationwide in February '23. This is down from June's 9.1 percent. The peak of the last 50 years was in March '80 when the annual rate topped 14.6 percent.



Multifamily — Apartment occupancy in Houston showed signs of improvement in February. The month recorded positive net absorption across all classes and an occupancy rate of 90.3 percent.



Purchasing Managers Index — Economic activity in Houston expanded in February at a slightly faster rate than January, according to the most recent Houston Purchasing Managers Index (PMI). The February '23 PMI registered 52.7, up from 50.8 percent in January '23. Readings over 50 generally indicate expansion in the economy, below 50, contraction.



Rig Count — The Baker Hughes count of active domestic rotary rigs hit 755 in mid-March, up 82 rigs from the same week the year before, according to data recently released by the company. The rig count is 37 shy of where it stood in mid-March '20 prior to the pandemic. However, the rig count peaked at 1,083 the last week of December '18. The pandemic only accelerated the decline.



Unemployment — The unemployment rate for metro Houston was 4.8 percent in February '23, up from 4.5 percent in January and 3.9 percent in December '22. The Texas rate was 4.2 percent, down from 4.7 percent the year prior. The U.S. rate was 3.9 percent, down from 4.1 percent in '22. The rates are not seasonally adjusted.



Vehicle Sales — New car, truck, and SUV sales are up 11.1 percent through February of this year compared to the same period in '22. Truck and SUV sales continue to dominate the market, accounting for almost four in five (79.0 percent) of all vehicles sold to date.

Patrick Jankowski and Clara Richardson contributed to this issue of Houston: The Economy at a Glance.

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HOUSTON MSA NONFARM PAYROLL EMPLOYMENT (000)

	February 23	January 23	February 22	Change from		% Change from	
				January 23	February 22	January 23	February 22
Total Nonfarm Payroll Jobs	3,314.6	3,285.4	3,177.3	29.2	137.3	0.9	4.3
Total Private	2,864.1	2,844.9	2,746.6	19.2	117.5	0.7	4.3
Goods Producing	515.8	516.2	499.8	-0.4	16.0	-0.1	3.2
Service Providing	2,798.8	2,769.2	2,677.5	29.6	121.3	1.1	4.5
Private Service Providing	2,348.3	2,328.7	2,246.8	19.6	101.5	0.8	4.5
Mining and Logging	68.0	68.3	63.3	-0.3	4.7	-0.4	7.4
Oil & Gas Extraction	29.1	29.2	29.1	-0.1	0.0	-0.3	0.0
Support Activities for Mining	37.3	37.3	32.9	0.0	4.4	0.0	13.4
Construction	222.1	220.8	217.6	1.3	4.5	0.6	2.1
Manufacturing	225.7	227.1	218.9	-1.4	6.8	-0.6	3.1
Durable Goods Manufacturing	137.0	138.5	134.0	-1.5	3.0	-1.1	2.2
Nondurable Goods Manufacturing	88.7	88.6	84.9	0.1	3.8	0.1	4.5
Wholesale Trade	173.1	173.0	165.0	0.1	8.1	0.1	4.9
Retail Trade	314.4	316.8	312.6	-2.4	1.8	-0.8	0.6
Transportation, Warehousing and Utilities	190.5	191.1	181.6	-0.6	8.9	-0.3	4.9
Utilities	20.1	20.1	19.0	0.0	1.1	0.0	5.8
Air Transportation	20.0	20.0	19.0	0.0	1.0	0.0	5.3
Truck Transportation	30.8	30.7	29.3	0.1	1.5	0.3	5.1
Pipeline Transportation	12.9	12.7	12.1	0.2	0.8	1.6	6.6
Information	33.3	33.4	31.7	-0.1	1.6	-0.3	5.0
Telecommunications	11.8	11.8	11.7	0.0	0.1	0.0	0.9
Finance & Insurance	115.7	115.5	111.2	0.2	4.5	0.2	4.0
Real Estate & Rental and Leasing	68.7	67.2	63.1	1.5	5.6	2.2	8.9
Professional & Business Services	552.4	543.8	523.5	8.6	28.9	1.6	5.5
Professional, Scientific & Technical Services	271.6	271.5	251.8	0.1	19.8	0.0	7.9
Legal Services	31.6	31.6	30.0	0.0	1.6	0.0	5.3
Accounting, Tax Preparation, Bookkeeping	29.2	28.8	28.7	0.4	0.5	1.4	1.7
Architectural, Engineering & Related Services	74.3	74.2	66.4	0.1	7.9	0.1	11.9
Computer Systems Design & Related Services	42.9	42.9	40.4	0.0	2.5	0.0	6.2
Admin & Support/Waste Mgt & Remediation	234.7	226.4	228.3	8.3	6.4	3.7	2.8
Administrative & Support Services	221.2	213.8	216.1	7.4	5.1	3.5	2.4
Employment Services	86.2	84.1	89.5	2.1	-3.3	2.5	-3.7
Private Educational Services	73.3	70.5	68.2	2.8	5.1	4.0	7.5
Health Care & Social Assistance	368.0	363.1	348.7	4.9	19.3	1.3	5.5
Arts, Entertainment & Recreation	35.8	35.0	32.5	0.8	3.3	2.3	10.2
Accommodation & Food Services	306.8	303.5	291.8	3.3	15.0	1.1	5.1
Other Services	116.3	115.8	116.9	0.5	-0.6	0.4	-0.5
Government	450.5	440.5	430.7	10.0	19.8	2.3	4.6
Federal Government	32.9	32.8	31.8	0.1	1.1	0.3	3.5
State Government	95.6	95.1	90.3	0.5	5.3	0.5	5.9
State Government Educational Services	54.7	54.2	50.9	0.5	3.8	0.9	7.5
Local Government	322.0	312.6	308.6	9.4	13.4	3.0	4.3
Local Government Educational Services	224.2	216.0	214.8	8.2	9.4	3.8	4.4

SOURCE: Texas Workforce Commission

The following files are not convertible:

since 2018.xlsx	Workpaper LKW 06 Change in gross plant
Summary.xlsx	Workpaper LKW 07 Revenue Requirement
year.xlsx	Workpaper LKW 10 Customer count by
KHOU_OBS_2018_TO_PRESENT.xlsx	Workpaper LKW 11
Galveston_Scholes_Field_OBS_2018_TO_PRESENT.xlsx	Workpaper LKW 12
KIAH_OBS_2018_TO_PRESENT.xlsx	Workpaper LKW 13
workbook.twb	Workpaper LKW 14 5 Year Weather tableau

Please see the ZIP file for this Filing on the PUC Interchange in order to access these files.

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