



Energy Council

The Changing Landscape for Transportation

Commissioner Alvin New
Texas Transportation Commission



Maintenance/Rehabilitation

Historical investments (Category 1)

Category 1 by District



District	2019 UTP	2020 UTP	2019-2020 Change	2022 UTP	2023 UTP	2022-2023 Change
ABL - Abilene	539,240,000	564,050,000	24,810,000	502,658,010	535,722,353	33,064,343
AMA - Amarillo	798,080,000	708,040,000	-90,040,000	567,879,182	747,709,813	179,830,631
ATL - Atlanta	381,160,000	327,380,000	-53,780,000	322,630,106	426,800,338	104,170,232
AUS - Austin	620,740,000	576,140,000	-44,600,000	623,742,256	761,333,641	137,591,385
BMT - Beaumont	308,590,000	363,470,000	54,880,000	398,318,901	476,625,518	78,306,617
BRY - Bryan	500,370,000	483,150,000	-17,220,000	435,934,337	470,336,736	34,402,399
BWD - Brownwood	175,970,000	195,450,000	19,480,000	209,601,526	257,413,518	47,811,992
CHS - Childress	222,860,000	216,710,000	-6,150,000	145,372,420	168,158,821	22,786,401
CRP - Corpus Christi	735,990,000	616,880,000	-119,110,000	522,232,868	622,371,753	100,138,885
DAL - Dallas	1,164,520,000	1,217,440,000	52,920,000	1,244,585,242	1,541,589,028	297,003,786
ELP - El Paso	271,670,000	325,620,000	53,950,000	398,974,630	502,385,693	103,411,063
FTW - Fort Worth	791,250,000	874,160,000	82,910,000	871,021,059	1,039,194,666	168,173,607
HOU - Houston	1,161,970,000	1,202,370,000	40,400,000	1,206,650,504	1,458,568,914	251,918,410
LBB - Lubbock	550,620,000	619,590,000	68,970,000	620,191,280	690,580,575	70,389,295
LFK - Lufkin	267,980,000	236,450,000	-31,530,000	224,702,139	275,014,171	50,312,032
LRD - Laredo	455,980,000	419,280,000	-36,700,000	452,829,087	547,366,568	94,537,481
ODA - Odessa	481,380,000	640,040,000	158,660,000	878,497,289	1,061,720,925	183,223,636
PAR - Paris	561,010,000	577,290,000	16,280,000	486,225,267	586,299,096	100,073,829
PHR - Pharr	347,530,000	361,130,000	13,600,000	454,498,704	578,199,437	123,700,733
SAT - San Antonio	1,228,160,000	1,132,650,000	-95,510,000	1,126,607,285	1,273,015,364	146,408,079
SJT - San Angelo	357,920,000	384,830,000	26,910,000	364,867,804	394,691,422	29,823,618
TYL - Tyler	516,800,000	563,910,000	47,110,000	571,469,434	716,605,587	145,136,153
WAC - Waco	524,120,000	523,940,000	-180,000	568,389,588	654,172,911	85,783,323
WFS - Wichita Falls	285,380,000	296,060,000	10,680,000	275,813,339	341,756,438	65,943,099
YKM - Yoakum	538,250,000	500,270,000	-37,980,000	452,607,741	521,276,668	68,668,927
TOTAL	13,787,540,000	13,926,300,000	138,760,000	13,926,299,998	16,648,909,956	2,722,609,958

Data based on
original UTP as
adopted in
August

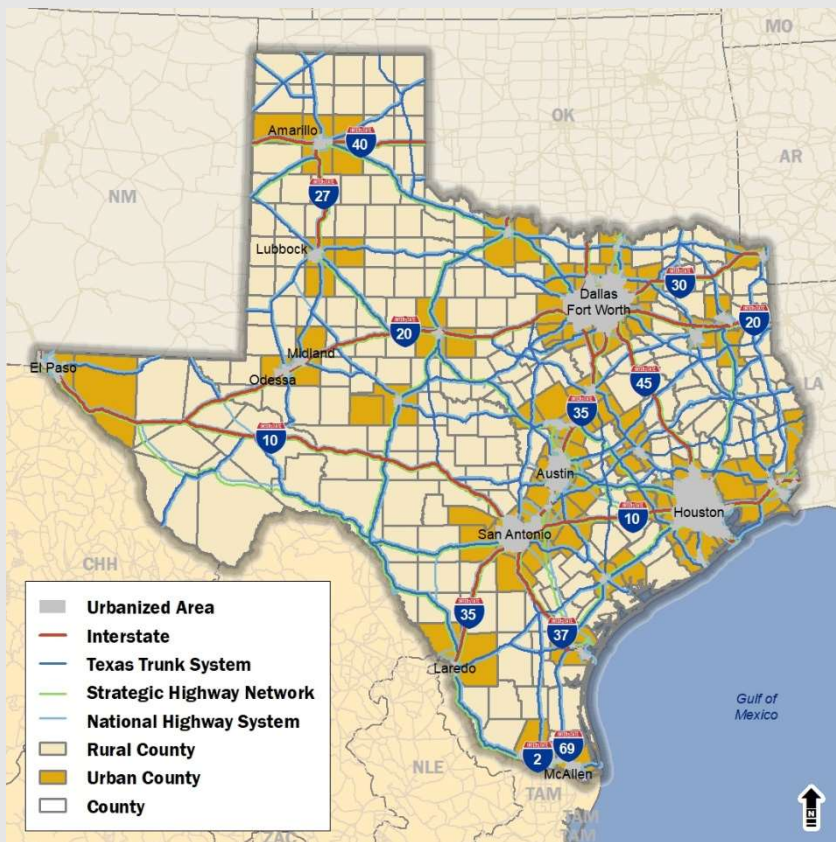




Rural and Statewide Connectivity



Rural and Statewide Connectivity Highway Network



Interstates

Network of controlled-access highways that forms part of the National Highway System.

Texas Trunk System

Network of rural highways to improve rural mobility, connect major activity centers, and provide access to ports of entry into Texas.

National Highway System (NHS)

National network of roadways important to the nation's economy, defense, and mobility.

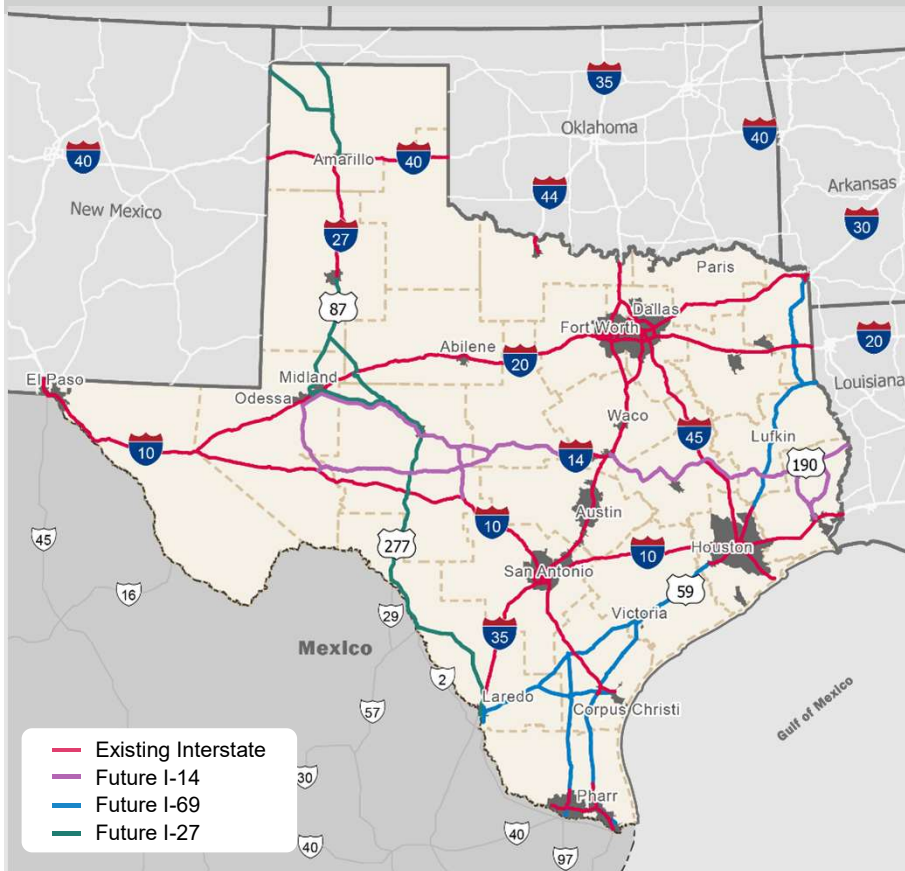
Strategic Highway Network (STRAHNET)

Network of roads deemed necessary for emergency mobilization and peacetime movement of heavy armor, fuel, ammunition, repair parts, food, and other commodities to support U.S. military operations.





Designated and Future Interstates in Texas



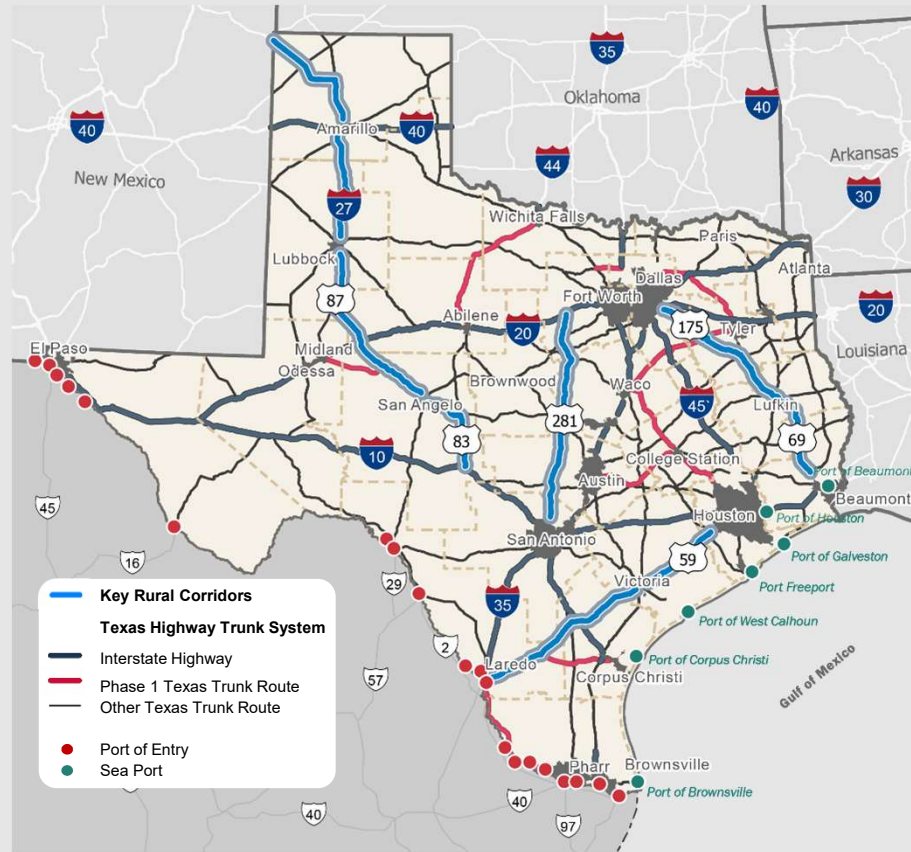
Corridor	Corridor Length (mi.)	Current Interstate Highway Designation (mi.)	Shared Designation with Other Interstates
I-69	1,134	161	0
I-14	1,031	26	53
I-27*	963	124	28
Total**	3,003	311	382

*Ports-to-Plains Corridor designated as a Future Interstate in the FY 22 omnibus appropriations bill and assumed will be designated as I-27"

** The I-27 and I-14 corridors overlap along I-20 in Midland-Odessa, SH 158 from Midland to Sterling City, and US 87 from Sterling City to San Angelo. Totals have been adjusted to avoid double-counting



Statewide Rural Connectivity – Key Rural Corridors Progress to Date



Since fiscal year 2015:

12 projects (\$255 M) have improved the Key Corridors to Four-Lane Divided or higher capacity and another **6 are currently under construction (\$364 M).**

Note: Costs are in Year of Expenditure dollars; updated August 2022



Key Rural Corridors 10-year Investment



2023 Unified Transportation Program (FY 2023–2032)

US 59

UTP Category	Programmed Funding (\$M)	Pct.
4R	\$623.8	100%
TOTAL	\$623.8	

US 69/US 175

UTP Category	Programmed Funding (\$M)	Pct.
4R	\$545.3	70%
12	\$198.0	25%
2	\$28.8	4%
1	\$7.0	1%
TOTAL	\$779.1	

US 87/US 83

UTP Category	Programmed Funding (\$M)	Pct.
4R	\$309.1	99%
1	\$1.5	1%
TOTAL	\$310.6	

Data based on 2023 UTP as adopted in August



Key Rural Corridors 10-year Investment (cont.)



2023 Unified Transportation Program (FY 2023–2032)

US 281

UTP Category	Programmed Funding (\$M)	Pct.
4R	\$317.7	100%
TOTAL	\$317.7	

Total Key Rural Corridors

UTP Category	Programmed Funding (\$M)	Pct.
4R	\$1,795.9	88%
12	\$198.0	10%
2	\$28.8	1%
1	\$8.5	1%
TOTAL	\$2,031.2	

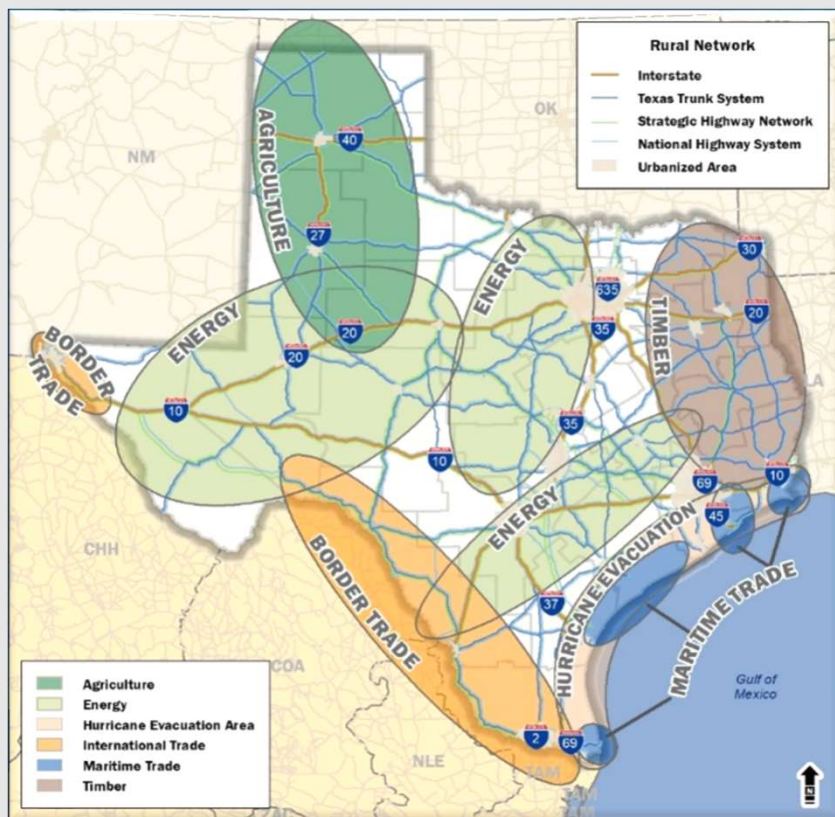
Data based on 2023 UTP as adopted in August





Statewide/Rural Connectivity Corridors and Economic Prosperity

How the Statewide and Rural Connectivity Network Supports the State's Key Economic Sectors



Agriculture Production

- Generates approximately \$34.9 B a year in sales statewide and \$12.6 B in GDP

Energy Production

- In April 2020, Permian Basin accounted for 39% of U.S. crude oil production and \$9 B in state taxes in royalties
- In 2020, the Eagle Ford Shale contributed \$170.6 M in local property taxes and \$520.6 M to local independent school districts.

Timber and Lumber Production

- In 2021, lumber industry contributed \$21.4 B to the Texas economy, including \$4.3 B in income to 68,917 workers

International Border Trade

- In 2020, supported 65% of U.S.-Mexico trade or \$352 B of total \$538 B U.S./Mexico trade

International Maritime Trade

- In 2019, Texas ports account for an average of 242.7 B in trade value annually or \$131.8 B in exports and \$110.9 B in imports

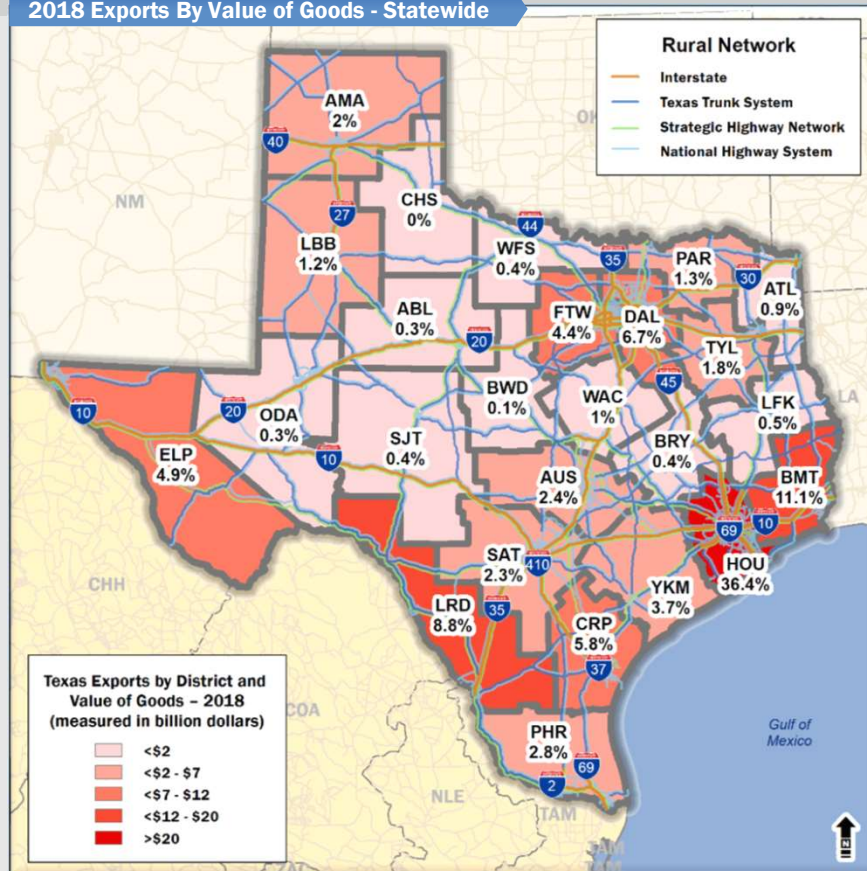
National Defense and Security

- In 2019, Texas military bases generated over 600 K direct and indirect employment and added \$75 B to the State's GDP

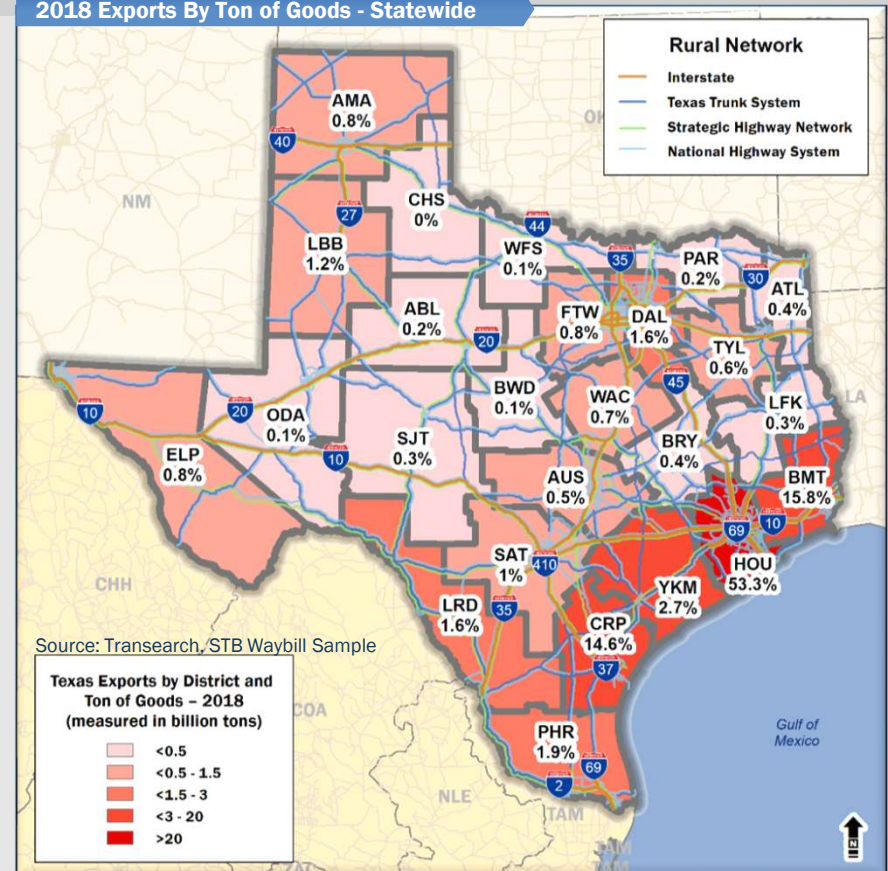


Statewide Exports by Value and Tonnage of Goods and District - 2018

2018 Exports By Value of Goods - Statewide



2018 Exports By Ton of Goods - Statewide



Top Challenges

First and Last Mile Connectivity



Freight Conscious
Infrastructure
Design



Multi-Modal
Conflicts and
Constraints



Incompatible Land
Uses



Environmental
Constraints and
Resiliency



Community
Impacts



Readiness for
Emerging
Technologies



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Port	Improvement Type	Project Name	Cost Estimate (\$M)
Port Houston	Safety	Jacintoport Road Area Freight Safety and Operations Plan	\$0.3
	Capacity	Jacintoport Road improvements	\$27.0
	Safety	Federal Road access management and safety study	\$0.3
	Capacity	Upgrade Clinton Dr to 3 lane with two way left turn lane	\$0.3
	Safety	Barbours Cut Area Operations & Safety Study	\$0.3
Port of Galveston	Capacity	Develop Port to I-45 Connectivity Plan	\$0.4
	Capacity	Four lane extension on 61st St from Broadway/SH87 to Harborside Drive/SH-275	\$17.3
	Bridge	Improve Pelican Island Causeway Bridge to increase loading and reconfigure roadways around Texas A&M Galveston campus	\$18.5
	Pedestrian	Add sidewalks along Harborside Dr between 37th and 25th St	\$0.1
	Pedestrian	Improve pedestrian bridge over Harborside Dr and RR	\$0.7
Port of Corpus Christi Authority	New Roadway	Add 5,100' of frontage road along the inside of future rail corridor adjacent to JFIT Corridor	\$5.5
	Capacity	Planning to develop OSOWOH Route from Port to T/NHFN - Study	\$0.2
	Railroad	Improve RR crossing signage and warning devices on SH 361	\$0.3
	New Roadway	New Roadway (SH 200) - West of Ingleside	\$14.0
Port Freeport	Safety	FM 1495 Operations & Safety Study	\$0.3
	Bridge	Replace Pine St bridge	\$15.0
	New Roadway	Develop frontage/backage roadway system to SH 36 for port expansion	\$7.5
	Capacity	Roadway improvements, signage, and security system for main gate complex	\$2.1
Port of Corpus Christi Authority	New Roadway	Add 5,100' of frontage road along the inside of future rail corridor adjacent to JFIT Corridor	\$5.5
	Capacity	Planning to develop OSOWOH Route from Port to T/NHFN - Study	\$0.2
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Energy Supply Chain in Texas



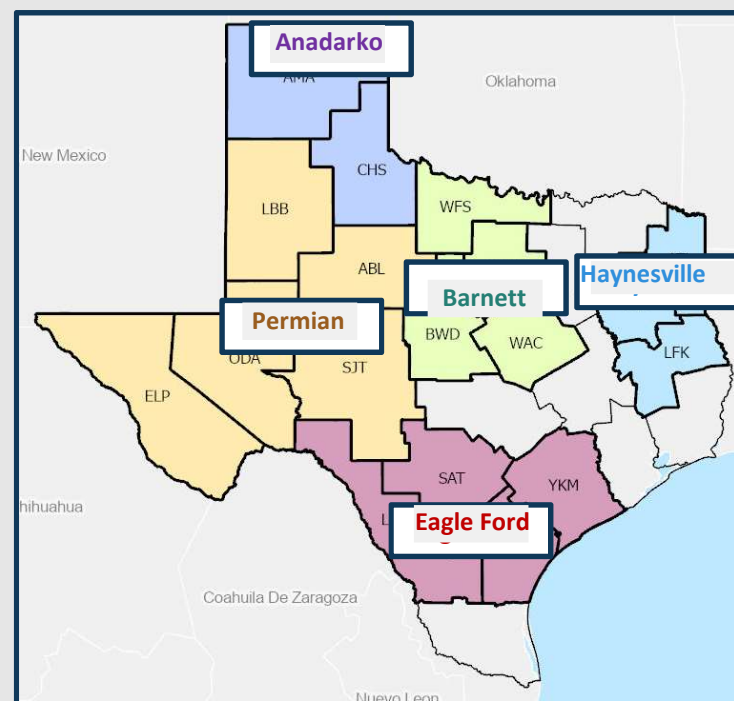
Energy Regions



UTP Allocations in Energy Sector Districts (\$B)

	2019 UTP	2020 UTP	19-20 Change	2022 UTP	2023 UTP	22-23 Change
Permian Basin	5.2	6.8	1.6	7.3	8.3	1.0
Eagle Ford	8.7	9.9	1.2	9.2	11.0	1.8
Barnett	6.6	6.9	0.3	7.0	7.6	0.6
Haynesville-Bossier	3.0	3.5	0.5	3.6	3.9	0.3
Anadarko	1.5	1.6	0.1	1.4	1.9	0.5
TOTAL	25.0	28.7	3.7	28.5	32.7	4.2

- **Permian Basin:** Odessa, San Angelo, Lubbock, Abilene, and El Paso Districts
- **Eagle Ford:** Laredo, Corpus Christi, San Antonio, and Yoakum Districts
- **Barnett:** Fort Worth, Wichita Falls, Brownwood, and Waco Districts
- **Haynesville-Bossier:** Atlanta, Tyler, and Lufkin Districts
- **Anadarko:** Amarillo and Childress Districts



Data based on original UTP as adopted in August 2023



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Annual Economic Impact of Energy Sector in Texas



3.1 million
jobs



\$291.7 billion
in income



\$426.6 billion
in GSP

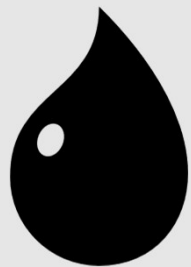
Source: Cambridge Systematics analysis using 2018 IMPLAN model for Texas



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U.S. Oil and Gas Production



CRUDE OIL
PRODUCTION

12,248

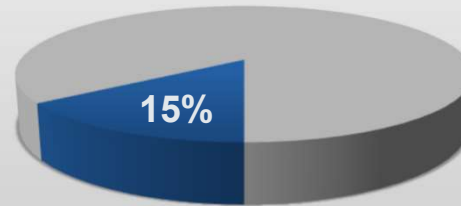
thousand barrels/day



DRY NATURAL
GAS PRODUCTION

33,968

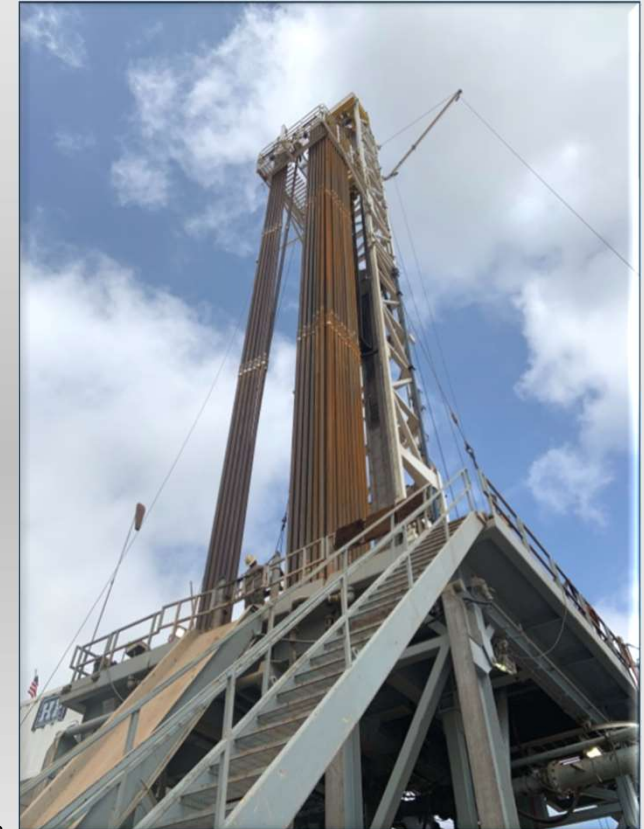
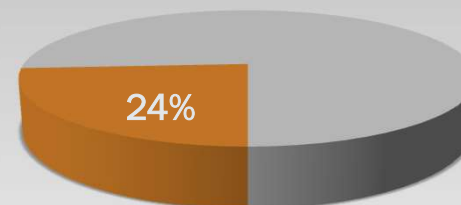
billion cubic feet



**THIRD
HIGHEST**

SHARE OF WORLD TOTAL

FIRST



Source: U.S. Energy Information Agency (EIA). State Profile and Energy Estimates, 2019 Texas Profile Data.



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Texas Ranks Number 1 in the U.S. for Oil and Gas Production



Metric	Total Texas Quantity (2019)	Texas Percent of U.S. Total
Number of oil wells	172,474	40.1%
Number of natural gas wells	129,110	24.0%
Field production of crude oil (annual thousand barrels per day)	5,101	41.5%
Dry natural gas production (annual million cubic feet)	8,170,468	24.1%
Oil refineries	30	22.2%
Refining capacity (barrels per calendar day)	5,787,494	30.8%
Natural gas processing plants	176	36.7%
Natural gas processing capacity (million cubic feet per day)	26,593	33.6%

Source: U.S. Energy Information Agency (EIA). State Profile and Energy Estimates, 2019 U.S. and Texas Profile Data.



Petroleum Products Imports and Exports (PADD 3), 2019

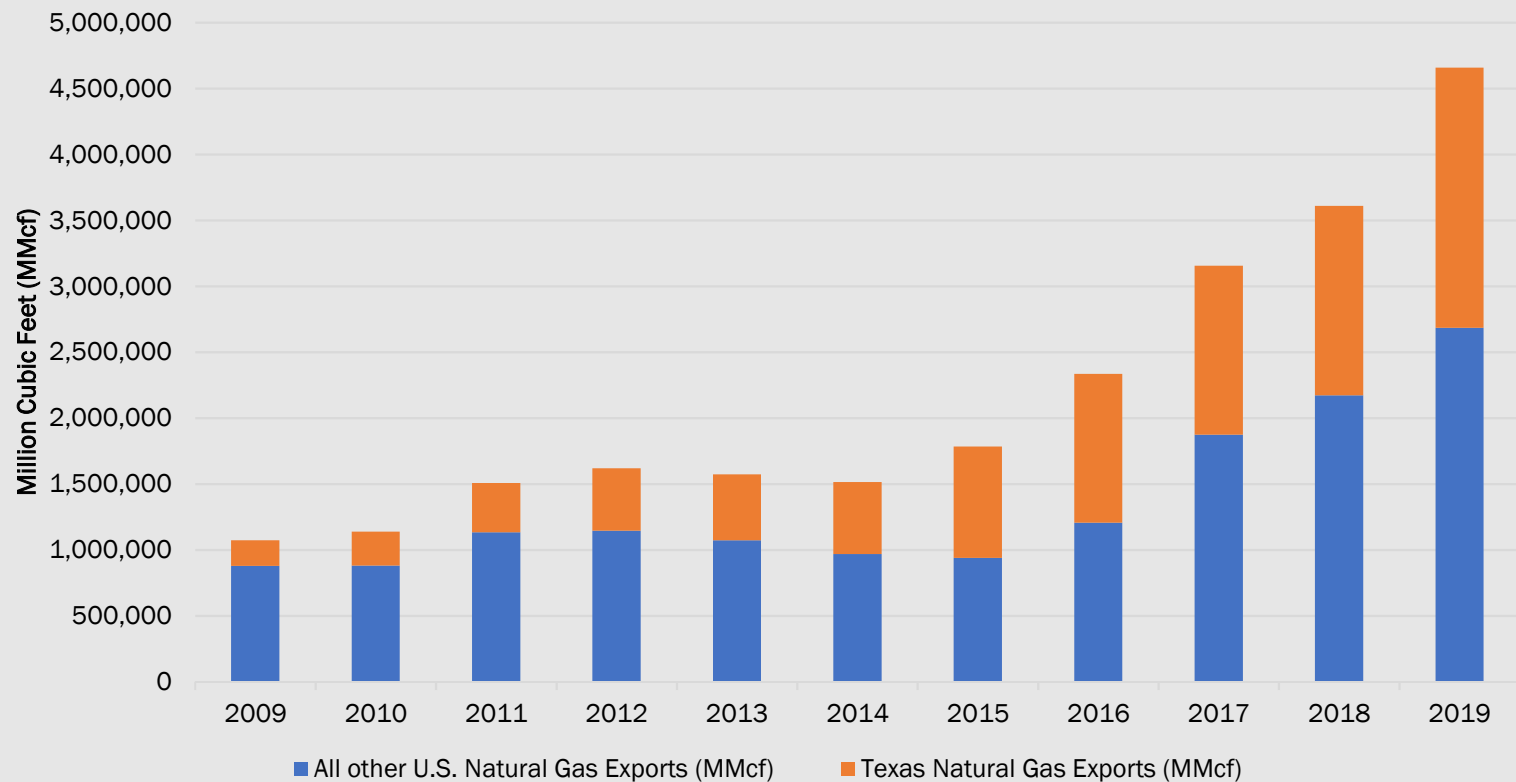


Export Commodities	Export Amount (annual-thousand barrels)	Import Commodities	Import Amount (annual-thousand barrels)
1. Crude Oil	1,015,067	1. Crude Oil	605,332
2. Finished Petroleum Products	995,411	2. Other Liquids	202,973
3. Hydrocarbon Gas Liquids	479,891	3. Finished Petroleum Products	47,204
4. Other Liquids	109,834	4. Hydrocarbon Gas Liquids	1,250
Total	2,600,203	Total	856,759

Source: U.S. Energy Information Agency (EIA). Petroleum & Other Liquids, Exports.



Texas Share of U.S. Exports of Natural Gas, 2009 – 2019

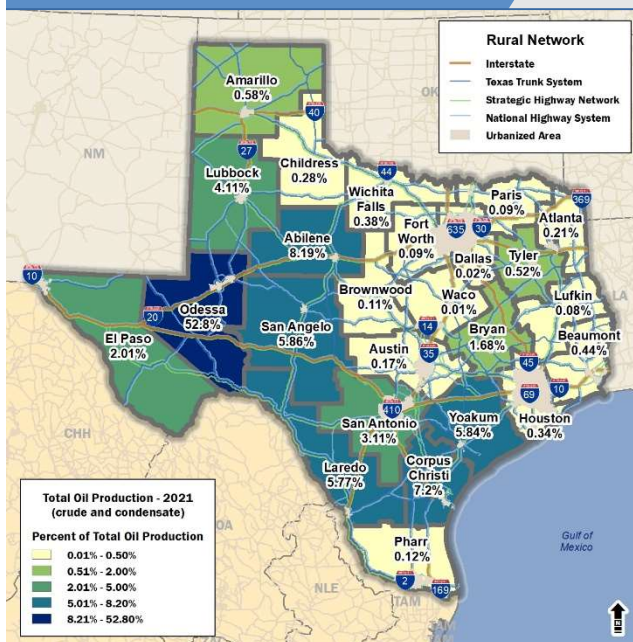


Source: U.S. Energy Information Agency (EIA)

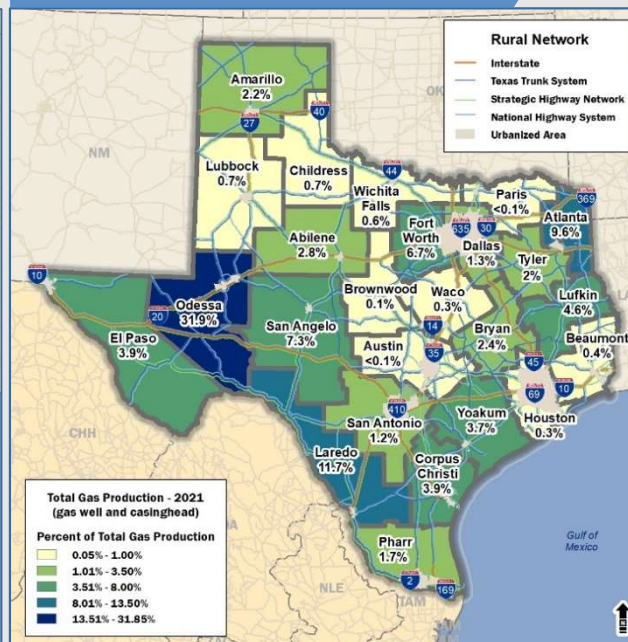


Statewide Oil, Natural Gas, Wind Energy Production by District Type – 2021

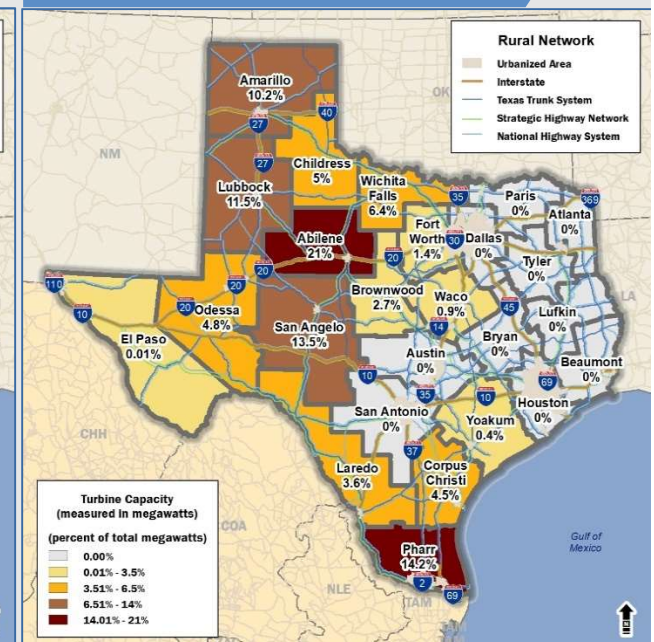
2021 Oil and Gas Production - Statewide



2021 Natural Gas Production - Statewide



2021 Wind Megawatt Capacity- Statewide



Oil production numbers include crude oil and oil from condensate Source: Railroad Commission of Texas - 2021



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Wind and Solar Energy in Texas



Solar Energy in Texas

- 13,242 MW installed and commercially operable capacity in Texas
- 15,227 MW total capacity
- One year growth rate is 51.8% (Sept. 2021 to Sept. 2022)

Wind Energy in Texas

- 35,354 MW installed and commercially operable capacity in Texas
- 36,395 MW total capacity
- One year growth rate is 9.64% (Sept. 2021 to Sept. 2022)



Summary of Statewide Energy Production By District Type – 2019



SUMMARY OF STATEWIDE ENERGY PRODUCTION BY DISTRICT TYPE 2019

	OIL		NATURAL GAS		WIND	
District Type	BBL*	% of Total	MCF**	% of Total	Megawatts	% of Total
Rural	1.2 B	74%	6.5 B	64%	22,161	64%
Urban	362 M	22%	2.7 B	27%	11,954	35%
Metro	62 M	4%	967 M	9%	470	1%
All Districts	1.6 Billion		10.2 Billion		34,586 MW	

Source: Railroad Commission of Texas - 2019



*Billions of barrels (BBL)

**Thousand cubic feet (MCF)

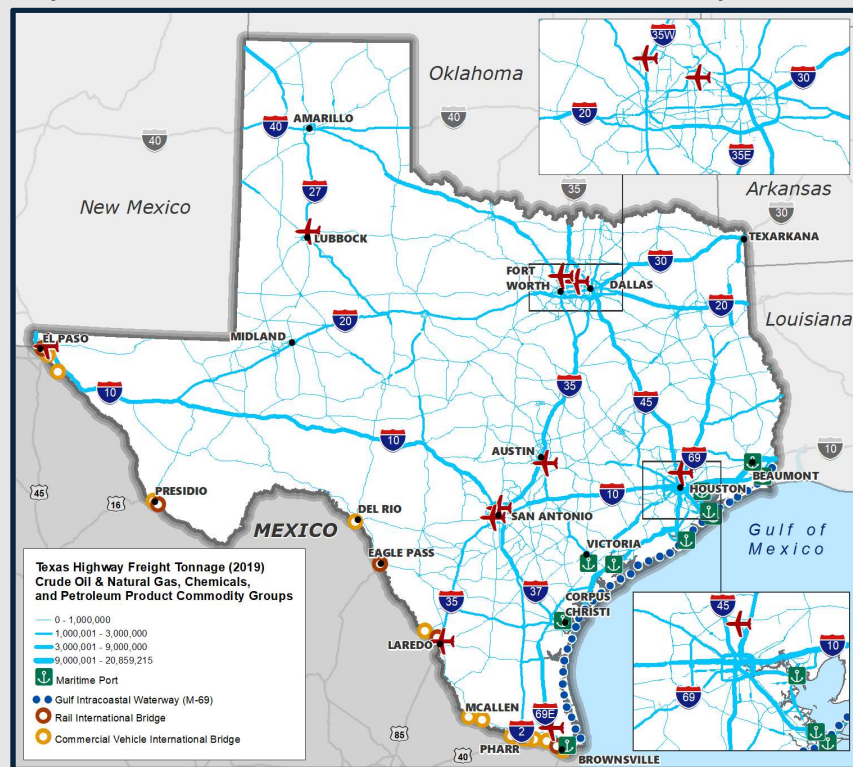
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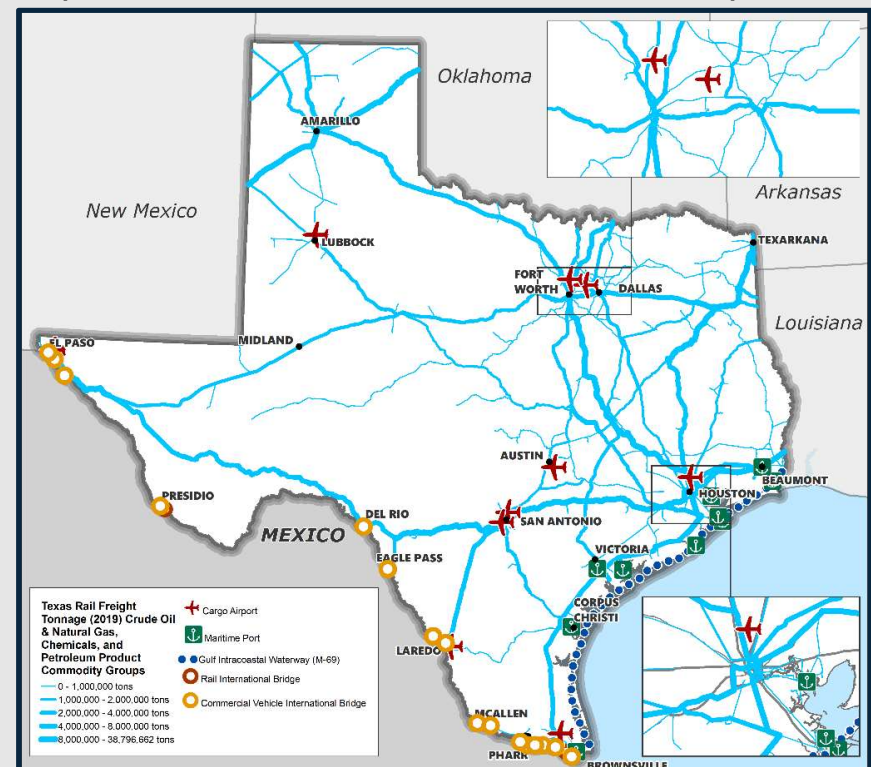
Oil and Gas Commodity Flows in Texas, 2019



Highway Freight Tonnage Flows
(Crude Oil, Natural Gas, and Petroleum Products), 2019



Freight Rail Tonnage Flows
(Crude Oil, Natural Gas, and Petroleum Products), 2019



Source: Transearch data supplemented by Cambridge Systematics

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Thank you

