



Energy Sector Update

Texas Transportation Commission
December 12, 2023

Carl Johnson, P.E., Director of District Operations





The Energy Sector is a story of:

- Partnerships
- Energy Production
- Safety
- Pavement Preservation
- Funding and Commitment



Permian Basin



Partnerships



5-Year Anniversary December 8, 2023

Fireside Chat

- Chairman J. Bruce Bugg, Jr. –
Chairman, Texas
Transportation Commission
- Secretary Don Evans –
Chairman, Permian Strategic
Partnership
- The Honorable John Cornyn –
U.S. Senator (TX)





- **Secretary Don Evans**
 - The magic is in our democracy. Locals coming together, working together to solve problems.

- **U.S. Senator John Cornyn**
 - Great leaders come-up with great ideas.
 - Celebrating the 5-yr anniversary of PSP today. PSP is producing good results.

- **Chairman J. Bruce Bugg, Jr.**
 - Today Texas is the 8th largest economy in the world.
 - The Permian is producing half of the oil in the country and would be the 3rd largest oil producing country in the world.



IN THE U.S., TEXAS IS...

#1 FOR ENERGY PRODUCTION

#1 FOR OIL & GAS EXTRACTION

#1 FOR OIL & GAS PIPELINE
CONSTRUCTION

#1 FOR PIPELINE TRANSPORTATION
OF CRUDE OIL

#1 FOR PIPELINE TRANSPORTATION
OF NATURAL GAS

#1 FOR WIND-POWERED GENERATION
& INSTALLED CAPACITY

#1 FOR ELECTRICITY GENERATION

#1 FOR HYDROELECTRIC
POWER GENERATION

“As a national and global leader in energy, some of the largest energy companies are based in the Lone Star State.”

Source: Office of the Governor; Texas Energy Industry; Dec. 2022

Energy Economics in Texas

JOBS, 2022

936,477

GROSS DOMESTIC PRODUCT, 2021

\$100.3 BILLION

*Source: Office of the
Governor; Texas Energy
Industry; Dec. 2022*

Source: Texas Comptroller; Energy Tour; 2023

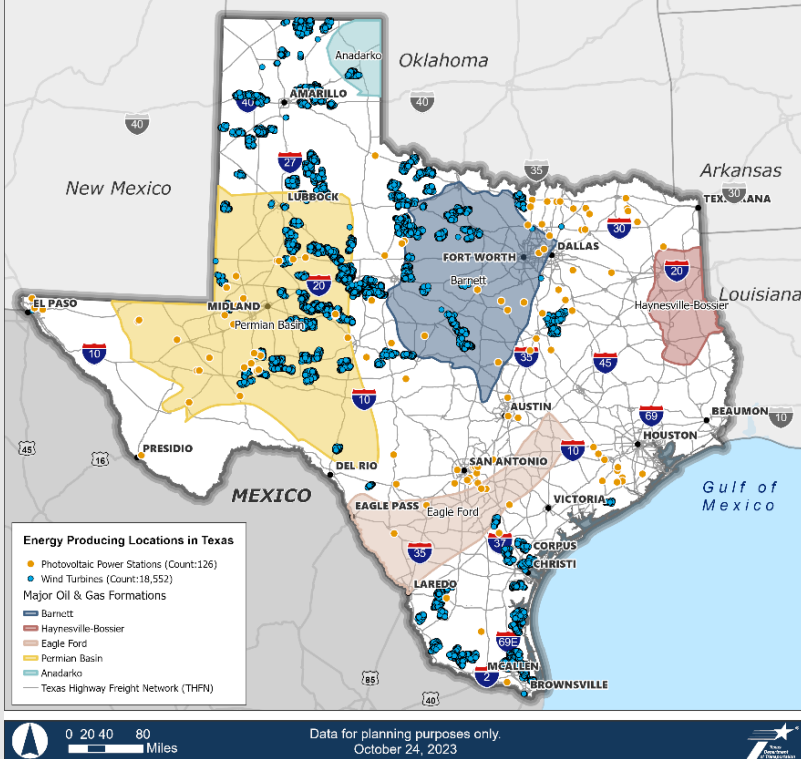


Energy Production

Energy Production in Texas, 2019-2022



Energy Producing Locations in Texas



	2019	2020	2021	2022
Crude Oil Production	1.86 billion barrels (41.5%)*	1.77 billion barrels (42.8%)*	1.74 billion barrels (42.4%)*	1.85 billion barrels (42.5%)*
Natural Gas Production (gross withdrawals)	10.43 trillion cubic ft. (25.6%)*	10.49 trillion cubic ft. (25.8%)*	10.74 trillion cubic ft. (25.8%)*	11.60 trillion cubic ft. (26.5%)*
Net Utility-Grade Solar Electricity Generation	4.37 million megawatt hrs. (6.1%)*	8.54 million megawatt hrs. (9.6%)*	14.92 million megawatt hrs. (12.9%)*	22.44 million megawatt hrs. (15.6%)*
Net Wind Electricity Generation	83.62 million megawatt hrs. (28.3%)*	92.44 million megawatt hrs. (27.4%)*	99.47 million megawatt hrs. (26.3%)*	114.79 million megawatt hrs. (26.4%)*

Sources: (1) Texas Delivers 2050 - Freight Plan; (2) U.S. Energy Information Agency (US EIA) production

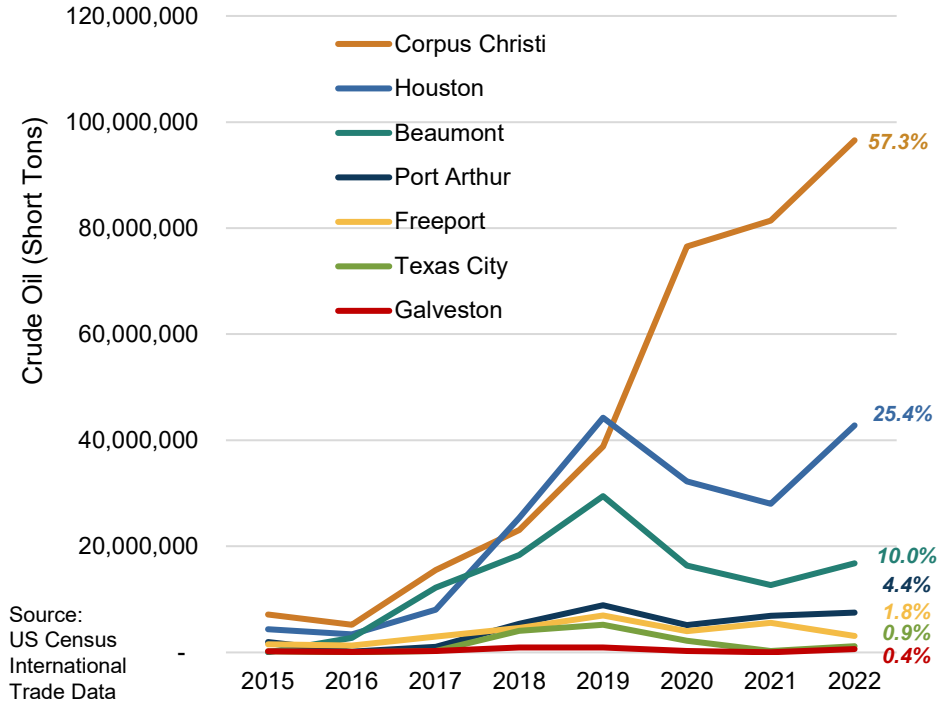
*As a percent of all U.S.

Exports of Crude Oil through Texas Maritime Ports, 2015 - 2022



Crude Oil Exports, Short Tons

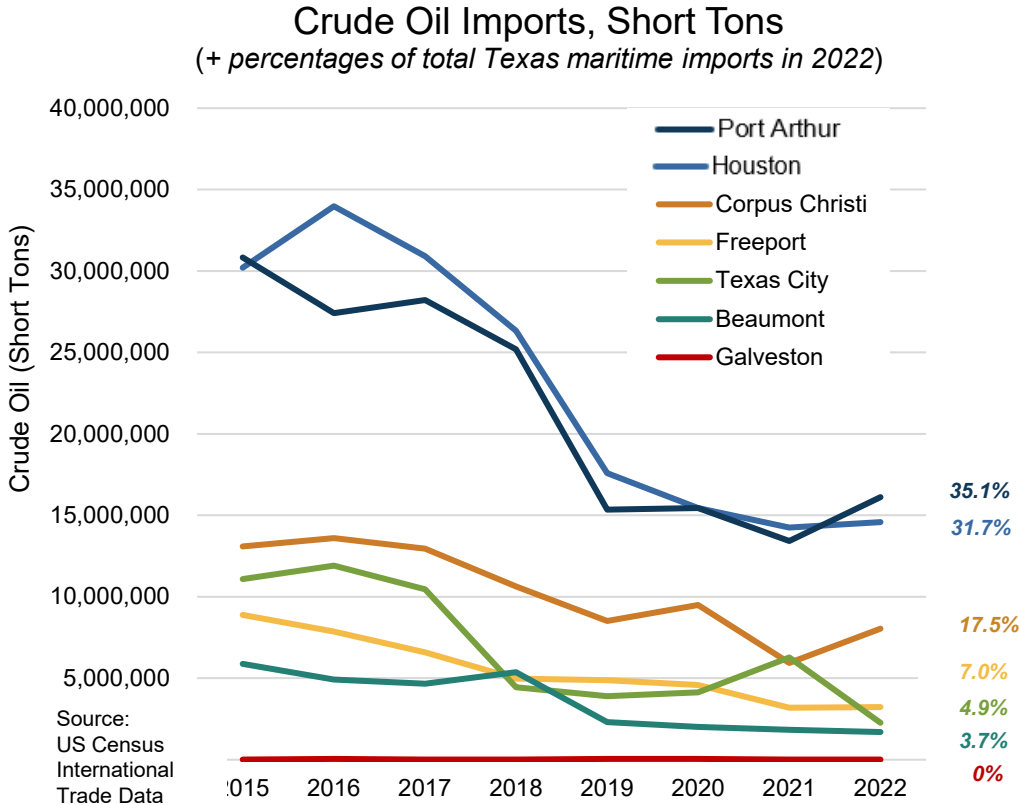
(+ percentages of total Texas maritime exports in 2022)



Source:
US Census
International
Trade Data

- Texas exports more crude oil and petroleum products than it imports.
- Port of Corpus Christi is the largest exporter of crude oil in Texas, accounting for 57%, of the state's total export tonnage, or nearly **100 million tons in 2022**.

Imports of Crude Oil through Texas Maritime Ports, 2015 - 2022



- Since 2015, Texas imports of crude oil have dropped significantly.
- In 2022, Port Arthur was the leading importer of crude oil with 35.5% of the state's total import tonnage or just over **16 million tons**.



Safety

Energy Sector - Safety Overview

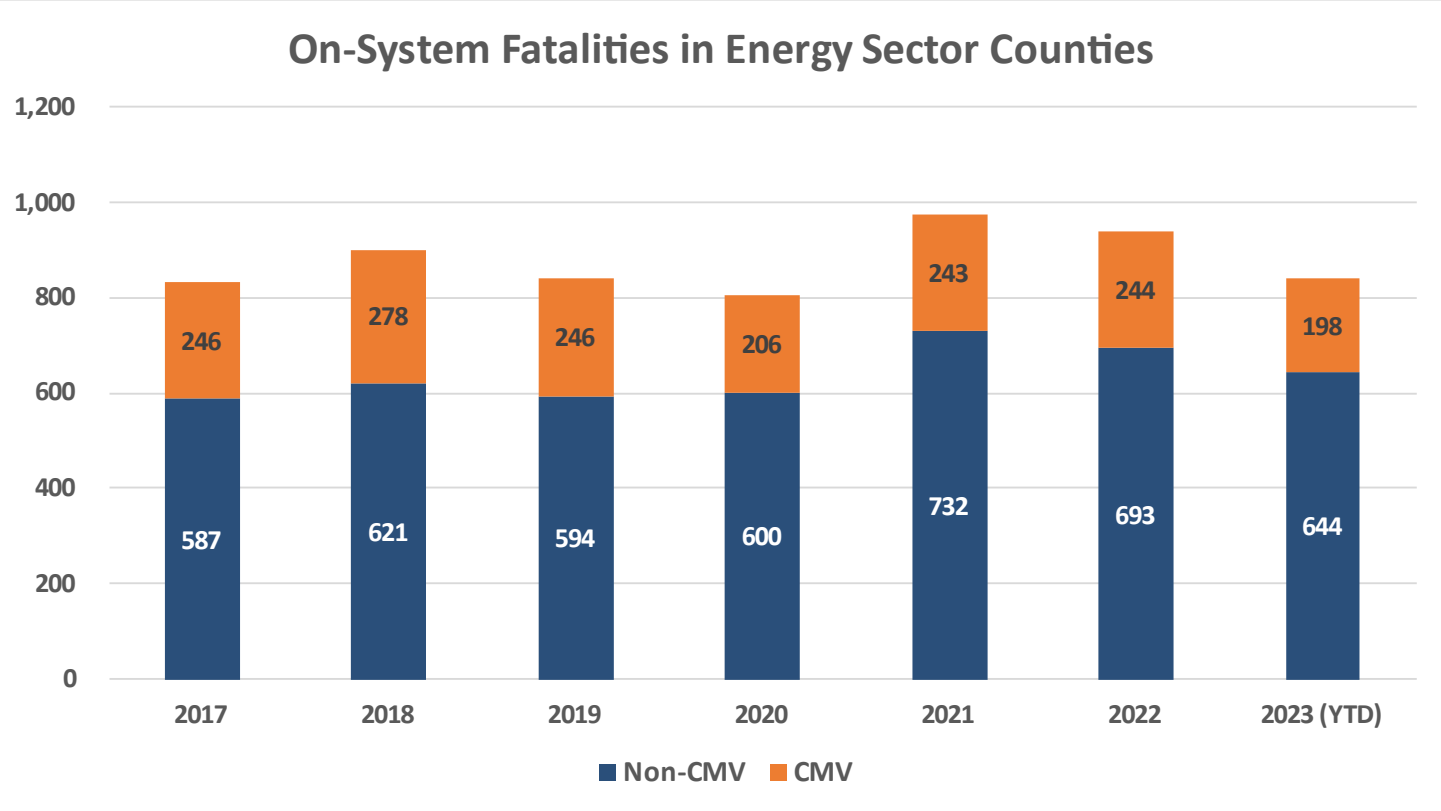


2022 On-System Only	Permian Basin Energy Sector Only	All Energy Sector Regions Combined	Statewide
All Vehicle Crash & Fatality Rates (per 100 MVMT)			
Crash Rate	88	106	116
Fatality Rate	3.24	3.21	1.44
Commercial Vehicle (CMV) Crashes and Fatalities (% of total)			
CMV Crashes ¹	16%	14%	9%
CMV Fatal Crashes ²	35%	26%	19%
CMV Fatalities ³	35%	27%	20%

- The **total crash rate** in both the Permian Basin and all energy sectors combined is **lower** than the statewide rate.
- The **total fatality rate** in the energy sector regions is **higher** than statewide.
- The **commercial vehicle crash, fatal crash and fatality percentages** are also **higher** than statewide.

¹Percent Total Crashes; ²Percent Total Fatal Crashes; ³Percent Total Fatalities

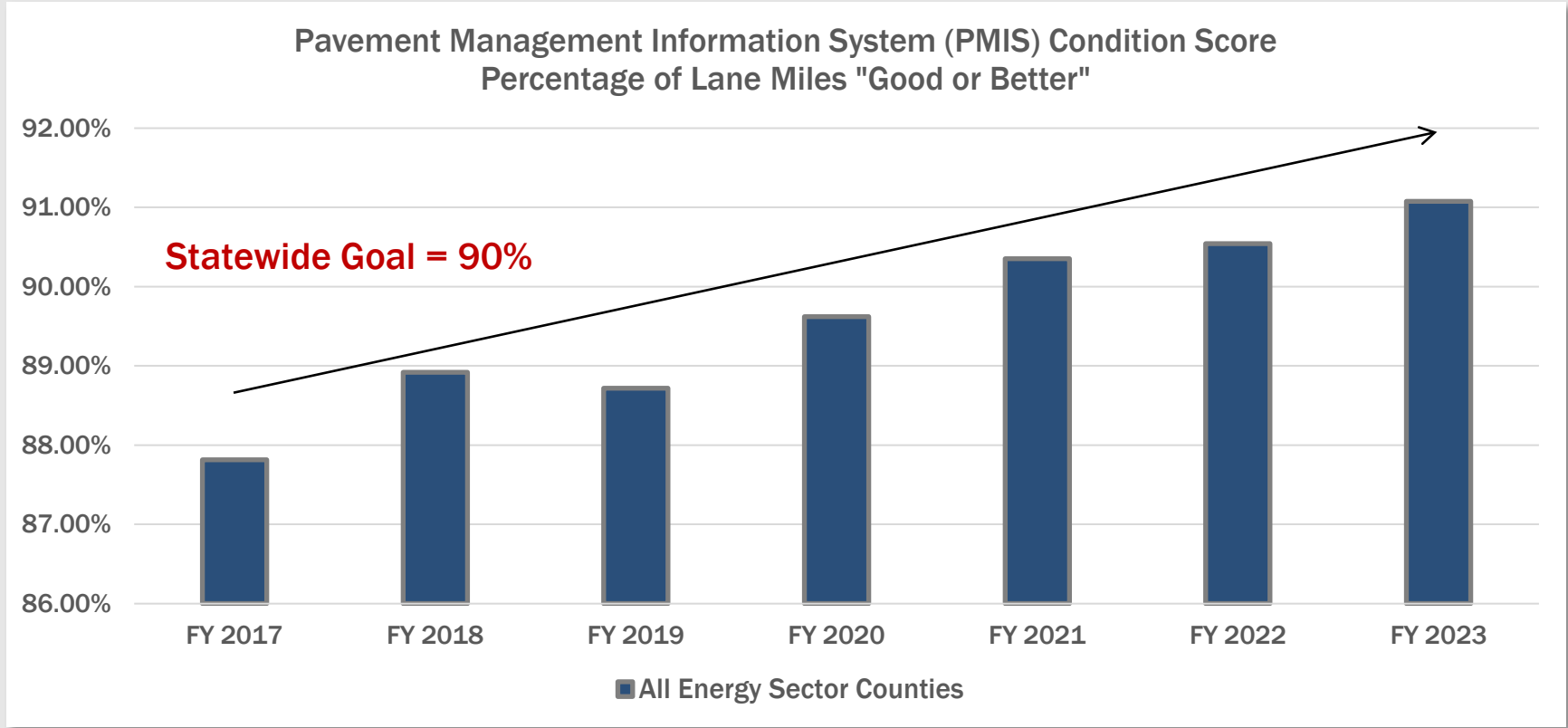
Source: **Roadway Data:** TxDOT Roadway Inventory, 2022; **Crash Rates:** TxDOT Crash Statistics, 2022



* Data as of 12/11/2023



Pavement Preservation



Permanent Traffic Counters – Distribution and State of the System



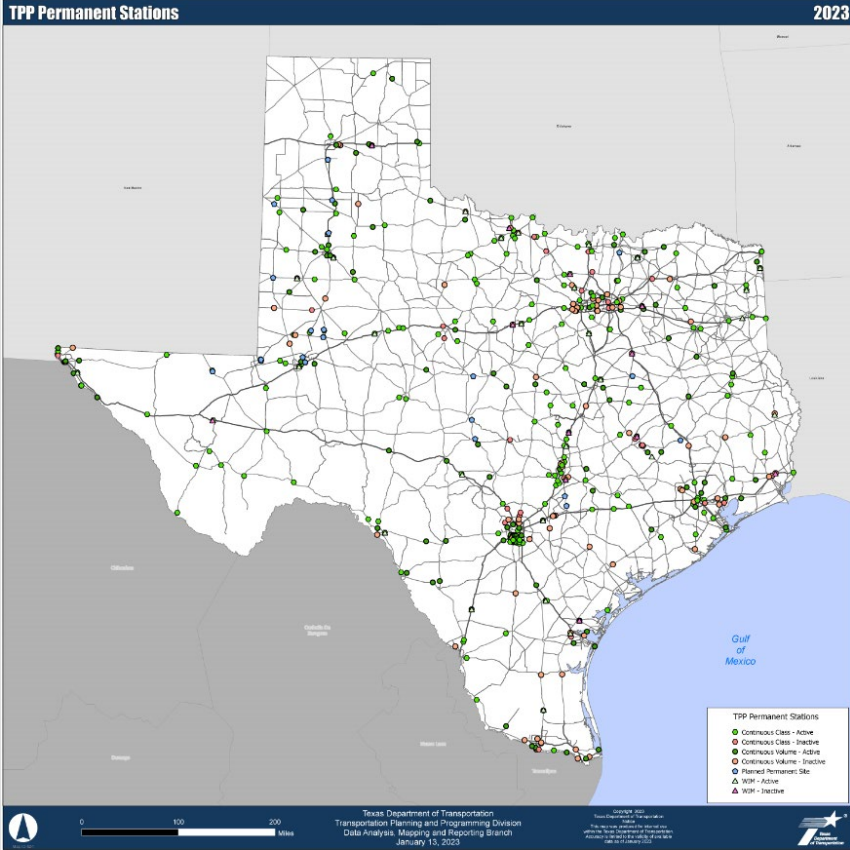
TxDOT’s traffic data collection program includes both permanent and portable data collection devices that are used in specific traffic data processes including:

- Derive main lane freeway traffic counts (Annual Average Daily Traffic – AADT)
- Identify percent of passenger vehicles and trucks
- Measure axle and vehicle weight
- Generate peak hour and directional distribution factors
- Support district pavement designs

*WIM – Weigh in Motion; pWIM – Portable Weigh in Motion

Type	Traffic Volume	Vehicle Type	Vehicle Weight	# of Devices
Permanent				
Volume	√			219
Class	√	√		171
WIM*	√	√	√	36
Portable				
Wavetronix	√	√		6
pWIMS*	√	√	√	10
They are TxDOT’s source of data to answer the question: “How does traffic change from day to day?”				

Permanent Traffic Counters – Distribution and State of the System

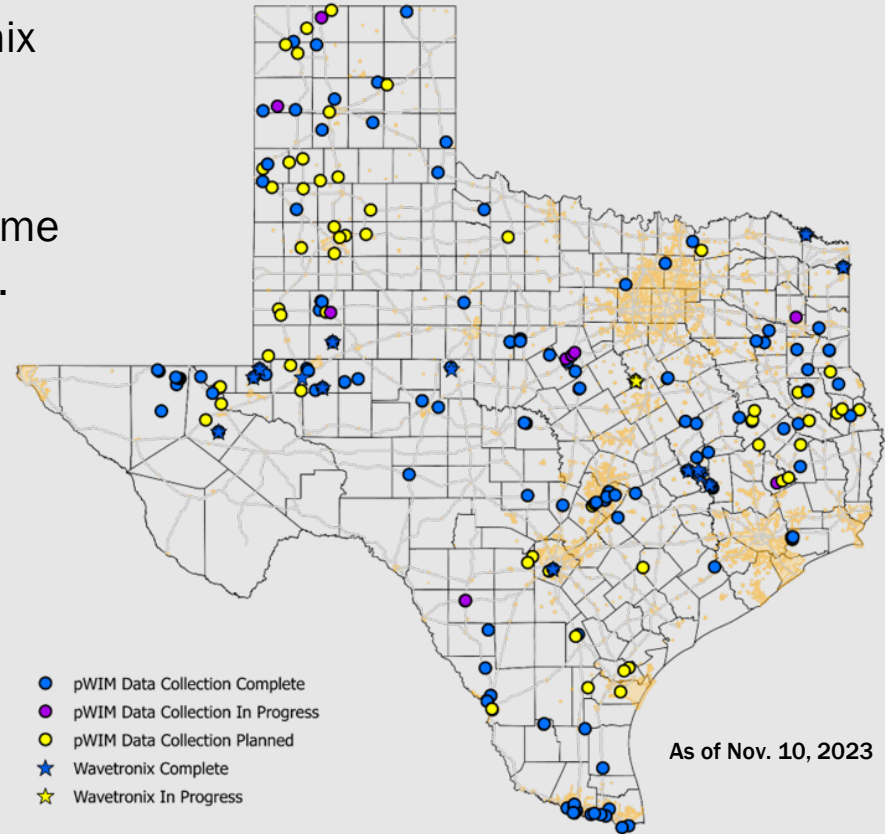


- Currently, TxDOT has 426 permanent counters deployed statewide.
- District staff are working with TPP and MNT to ensure if a site becomes inactive, they are able to quickly evaluate the reason.
- Reasons for site inactivity include:
 - Roadway construction (70%)
 - Pavement issues (12.5%)
 - Equipment failure (12.5%)
 - Other (5%)

Portable Traffic Counters – Data Collection Sites



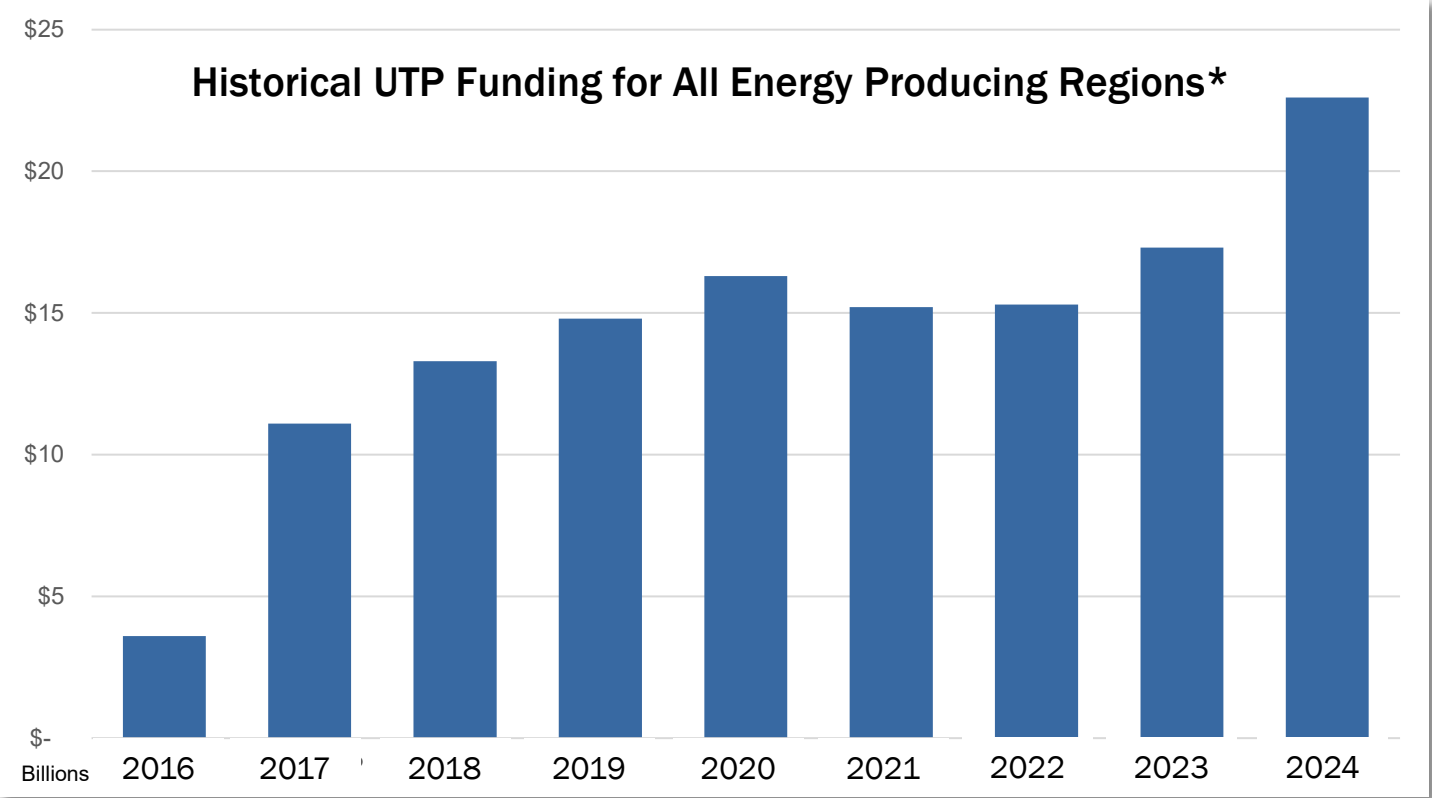
- Portable traffic counters, pWIMs and Wavetronix devices, supplement TxDOT's permanent data collection program statewide.
- Their use is especially useful in high truck volume and construction areas like our energy sectors.





Funding and Commitment

Energy Sector Funding – Historical Trend



* Includes funding for projects in all 12 UTP funding categories.

Targeted Energy Sector Funding

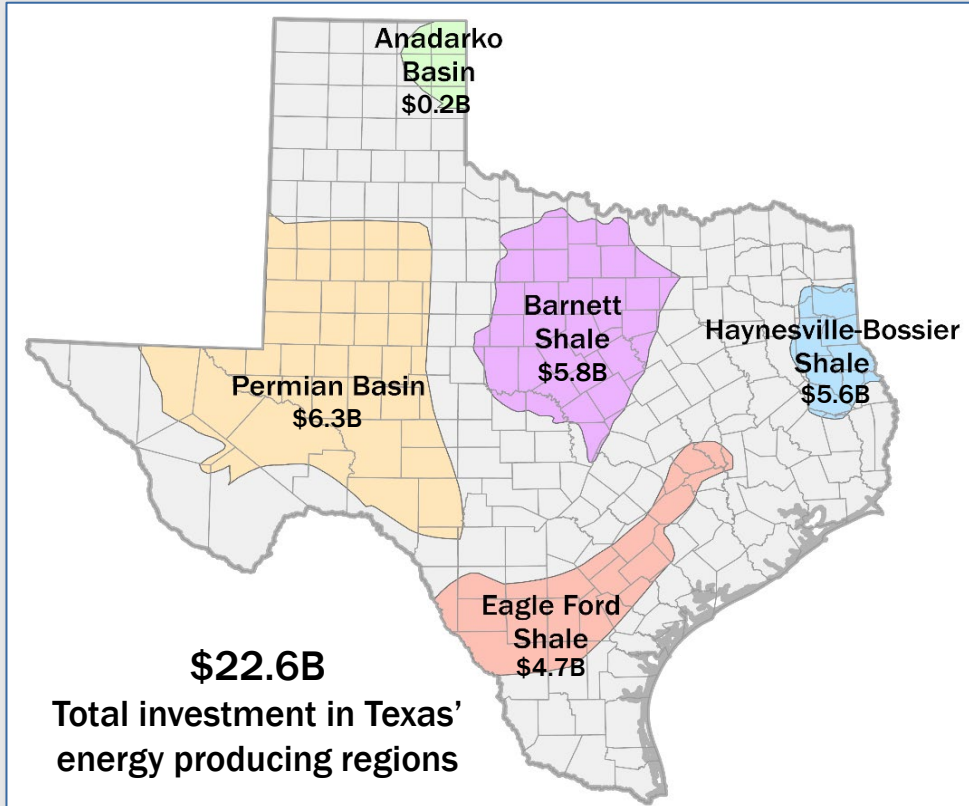


Funding focuses on safety and preservation

- Category 11 - Energy Sector
 - **\$2.19 billion** let statewide since FY 2018
 - **\$3.5 billion investment in 2024 UTP**
- Category 12 Permian Promise
 - A total of **\$600 million** originally programmed in the FY 2020 and 2021 UTPs
 - **\$103 million** has already let and is under construction or completed in El Paso, Lubbock, and San Angelo Districts
 - **Additional \$497 million** is under development and programmed in the UTP with a plan to let over the next 10 years



Energy Sector Projects in the 2024 UTP



Includes all fully and partially funded projects in all 12 funding categories in the 2024 UTP (FY 2024-2033).



KEY POINTS

Energy Sector – Key Points



- The Energy Sector is vital to the economy of Texas and the nation.
- Challenges remain with safety, congestion, and roadway preservation.
- TxDOT has been and will continue to respond to the needs of the energy sector and the citizens of Texas.

