

# Corpus Christi Industrial Development

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This is not the 1980s. The world has turned, and many local economies in Texas may be impacted quite differently by the downturn in crude oil prices this time around.

The Corpus Christi region stands out as an area that anticipates a net positive economic impact from reduced upstream oil and gas activity. Its massive level of new industrial development offers Texas real estate professionals a look at how economic diversity can help bolster local real estate markets during periods of economic uncertainty.

## Plan for Diversification

About five years ago, with the Eagle Ford shale region in its infancy, the City of Corpus Christi and the Corpus Christi Regional Economic Development Corporation (CCREDC) began to identify and court global industrial firms that used natural gas and natural gas liquids (NGLs) as a feedstock. Already home to crude oil refineries, the thought was that the region's proximity to the Eagle Ford placed it in a strong position to benefit from the play's oil and gas production.

"We thought that increasing downstream industrial development based on cheap natural gas would help us weather future price drops and also diversify our economy," says Judy Hawley, chair of the Port of Corpus Christi Commission. "It's looking like our plan was a good one."

Over \$28 billion in new projects are under construction or in final permitting.

A number of factors appealed to companies that are locating new facilities in Corpus Christi. A well-positioned 45-foot-deep port to handle larger ship traffic and access to cheap, plentiful natural gas were often at the top of the

### The Takeaway

Throughout Texas, people are concerned about the oil industry downturn, fearing another 1980s bust. But the Corpus Christi area is an example of how economic diversification creates employment opportunities that may counter the decline in the drilling sector.

list. However, being in attainment for air quality (meeting government regulations) has also been a huge advantage. Corpus Christi is currently the largest industrial area in the country in air attainment.

“Companies looking at Corpus discover that the permitting process for new industrial facilities is much less onerous in an area that is in attainment,” says Corpus Christi Mayor Nelda Martinez.

The existing harbor bridge, built in 1959, is also being replaced with a much taller structure to provide more clearance for bigger ships. The new bridge, scheduled to be completed by 2020, will offer 67 more feet of vertical clearance at 205 feet from the waterline.

## New Projects Coming to Town

The bulk of new development and expansions in the region are related to downstream oil and gas activities (see table). Projected construction completion dates extend out to 2018. By the time the dust settles, more than 2,000 new direct permanent jobs will be created.

One of the earliest arrivals was TPCO America’s pipe-processing plant. The facility is east of Gregory, Texas, across U.S. 181 from Port Corpus Christi’s La Quinta Trade Gateway site. The 1.6 million-square-foot plant is the largest single investment in a U.S. manufacturing facility by a Chinese company.

The TPCO America facility will produce about 500,000 metric tons of four-inch through 10¾-inch seamless steel pipe annually, primarily for use in the energy industry around the world.

## Publicly Announced New Industrial Projects or Facility Expansions in Corpus Christi Region (Last Five Years)

Company Name	Facility Type	\$ Investment	Construction Start	(Approximate) Construction End	Permanent Jobs	Feedstock	Finished Products
TPCO America (Phase I)	Pipe Finishing	Total \$1.3 bil.	Oct. 2011	Nov. 2014	Total of 800	Iron ore	Green seamless pipe
TPCO America (Phase II)	Pipe Manufacturing		Aug. 2014	Year-end 2016		Green seamless pipe	Finished and threaded pipe
Cheniere	LNG Exports	\$11 bil.	Mid-2015	2018	200	Natural gas	Liquified natural gas
Cheniere	Condensate Distribution	\$500 mil.	Unknown	Unknown	50	Condensate	Condensate
OxyChem	Propane Exports	\$60 mil.	Sept. 2014	2015	60	Propane	Propane
OxyChem	Ethylene Production	\$1.3 bil.	Dec. 2014	2017	140	Ethane	Ethylene
M&G Resins	PET plant	\$1.1 bil.	Nov. 2014	2016	220	Ethylene glycol	Plastic PET pellet catalysts
Voestalpine Texas	Steel Production	\$770 mil.	Apr. 2014	2016	150	Iron ore pellets	High purity hot-briquetted iron (HBI)
Castleton Commodities International	Condensate Splitter	\$400 mil.	Mid-2015	2016	35	Condensate	LPG, naptha, kerosene, gasoil, fuel oil
Magellan Midstream	Condensate Splitter	\$400 mil.	Jan. 2015	2016	105	Condensate	LPG, naptha, kerosene, gasoil, fuel oil
TexStar Midstream Services	Gas Fractionator	\$100 mil.	Feb. 2014	Year-end 2015	18	Wet gas	Ethane, propane, butane, condensate
Trafigura	Storage Tanks/Distribution	Total \$800 mil.	2013	2015	Unknown	Oil & condensate	Oil & condensate
Plains Marketing	Storage Tanks/Distribution		2013	2015	Unknown	Oil & condensate	Oil & condensate
Martin Midstream	Storage Tanks/Distribution		2013	2015	Unknown	Oil & condensate	Oil & condensate
Eagle Materials	Frack Sand Distribution	\$22 mil.	Mid-2012	2013	40	Raw frack sand	Graded frack sand
LyondellBasell	Petrochemical Production	\$500 mil.	Nov. 2014	Year-end 2015	18	Ethane	Ethylene
Flint Hills Resources	Refinery	\$250 mil.	2012	2014	N/A	Crude oil	Refined petroleum products
Valero	Refinery	\$650 mil.	2012	2014	N/A	Crude oil	Refined petroleum products
Superior Weighting Products	Drilling Products	\$18 mil.	Mid-2014	Mid-2015	20	Barium sulfate	Barite for drilling fluids
Celanese	Methanol Production	\$750 mil.	Early 2015	2017	45	Natural gas	Methanol
Celanese	Compounding Facility	\$150 mil.	Mid-2015	2017	106	Polystyrene	Assorted engineered polymers

Source: Corpus Christi Regional Economic Development Corporation

Another new company is Voestalpine Texas. The world's largest manufacturer of specialty steel, Voestalpine Texas will use natural gas, which is more environmentally friendly than traditional petroleum coke, to reduce impurities in iron ore pellets imported from Brazil. No hazardous byproducts are produced in the purification process.

The hot iron will be poured into palm-sized bricks known as hot-briquetted iron or "HBI." About half of the plant's production will be shipped to Austria to develop a wide variety of steel products, including oilfield pipe, steel rails and flat steel for vehicle manufacturing.

By far, the most expensive project in the region will be Cheniere Energy's \$11 billion liquefied natural gas (LNG) export facility. The natural gas liquefaction plant will be constructed on one of Cheniere's existing sites originally permitted to import LNG back when natural gas was thought to be a declining resource in the United States.

The Cheniere site is located on the La Quinta Channel on the northeast side of Corpus Christi Bay in San Patricio County. The facility will have an export capacity of 2.1 billion cubic feet of LNG per day when completely built out. Cheniere is completing the federal and state permitting process, and the project is tentatively slated for completion in 2018.

Cheniere has also closed on approximately 485 acres in Ingleside for a condensate distribution facility. Plans include two marine docks capable of handling mid-sized crude oil tankers for shipping condensate overseas and barges for domestic delivery.

Last summer, the export of condensate outside the United States became legal under very limited conditions. The expectation is that the limitations on condensate exports will be further loosened over time. Cheniere is positioning itself to handle increased exports as the need arises.

M&G Chemicals, a privately owned Italian company, is constructing the world's largest PTA/PET chemical plant in Corpus Christi with its investment of more than \$1 billion.

Purified terephthalic acid (PTA) is a raw material used in making high-performance multi-purpose plastics. Also, polyester fibers based on PTA improve synthetic fabric performance, both alone and in blends with natural and other synthetic fibers.

Polyethylene terephthalate (PET) is a plastic resin made from PTA. PET is used to make synthetic fibers and clear, strong, lightweight plastics widely used for packaging foods and beverages such as soft drinks, juices, cooking oil and water.

The facility will be located on Port Corpus Christi's Inner Harbor. With access to three Class I railroads at the port, M&G Chemicals will be a major rail user, shipping an estimated 15,000 carloads of product per year. PTA can be produced from a variety of petrochemical feedstocks such as ethylene or propylene.

Occidental Chemical Corp. (OxyChem) is working with Mexican petrochemical company Mexichem to build a \$1.3 billion ethylene cracking plant in Ingleside. The processing or "cracking" of ethane feedstock turns it into the petrochemical ethylene. The majority of the plant's production will be sold to Mexichem to produce PVC resin and piping. The most popular uses for ethylene are polyethylene plastic products or ethylene glycol (antifreeze).

LyondellBasell has also broken ground on a major expansion of their Corpus Christi ethylene cracking facilities. The expansion should almost double their current production of ethylene. Constructing a new plant could have taken five years or more, so the company instead chose to expand existing facilities to take advantage of cheap, plentiful ethane.

Finally, Flint Hills Resources LP and Valero Energy have spent hundreds of millions of dollars to expand their Corpus Christi refineries' capacity to handle more light Eagle Ford crude. As a bonus, state-of-the-art pollution controls in the new facilities are actually expected to reduce emissions below what is required by regulatory agencies.

CCREDC expects to see additional development and permanent employment stemming from all the basic industries locating in the region. Much like the automotive assembly sector, an array of different suppliers and service companies are needed now and will be needed to provide maintenance, engineering, logistics, testing expertise and other critical ancillary goods and services to these plants.

## Tight Labor Markets

All the new construction will require a significant skilled labor force, something that continues to be in short supply across Texas. However, industry and workforce officials think that any downturn in the upstream oil and gas sector could work out well for Corpus Christi.

“Corpus Christi will need thousands of craft workers in the next three years,” according to Mayor Martinez. “We need truck drivers, welders, fabricators, scaffolding builders, electricians and site preparation folks. The list goes on.” The Corpus Christi MSA’s overall unemployment rate has dropped from 8.4 percent in November 2010 to 5 percent in January 2015.

The upstream oil and gas sector pulled a lot of skilled labor out of many communities in Texas, and Corpus Christi is no exception. “We are hoping that many of the laborers who left Corpus Christi to work in drilling operations will be willing to come back to work at home in the construction sector,” says John Plotnik, executive vice president of CCREDC.

## The Future

City and county leaders remain proactive when it comes to keeping up with infrastructure, education, security and housing needs.

The port, the City of Corpus Christi and local industries recently pitched in to hire water consultants. The region has plentiful water and several of the new industries have chosen to desalinate bay water for their use. But a cost-benefit analysis of all possible sources of water, including wastewater recycling and desalination, is being carried out to refine future needs.

The region is also looking out another five years to find the next key industry. One possibility showing great promise is unmanned aircraft systems or “drones.”

In December 2013, the Federal Aviation Administration selected six public institutions to conduct research using drones to incorporate the technology into the national airspace for public and private purposes. Texas A&M University Corpus Christi (TAMUCC) was one of the six.

Known as the Lone Star Unmanned Aircraft Systems Initiative (LSUASI), the program is a statewide economic development initiative being led by TAMUCC.

Uses for drones are expected to burgeon in the coming years according to TAMUCC officials. Some possibilities beyond the obvious varieties of surveillance work include locating and assessing distressed vessels at sea and land surveying. A whole new wave of manufacturers could come for the technology transfer with TAMUCC as well.

“We’re always on the lookout for that next new sizzle,” says Plotnik. 📍

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