



# RICE ANNUAL FORUM

*David Claggett, Senior Vice President, Kiewit Energy Group*

# KIEWIT OVERVIEW

## MOBILE WORKFORCE

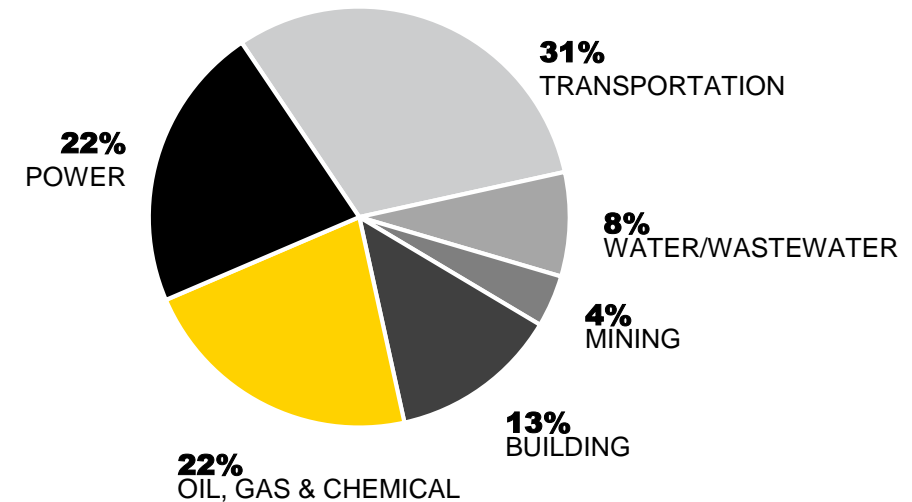
We send strong teams of staff and direct-hire craft to any location.

★ OGC Headquarters  
● Office Locations

## OUR PEOPLE

- **100%** employee owned
- **50 million** direct hire manhours annually
- Workforce of **22,000 employees**
- Over **1200 engineers** in the power, OGC and infrastructure markets

## REVENUE BY MARKET



*Based on 2017 contract values*

# DRIVING DOWN SAFETY INCIDENTS



## PIONEER

### INDUSTRY PIONEER OF SAFETY

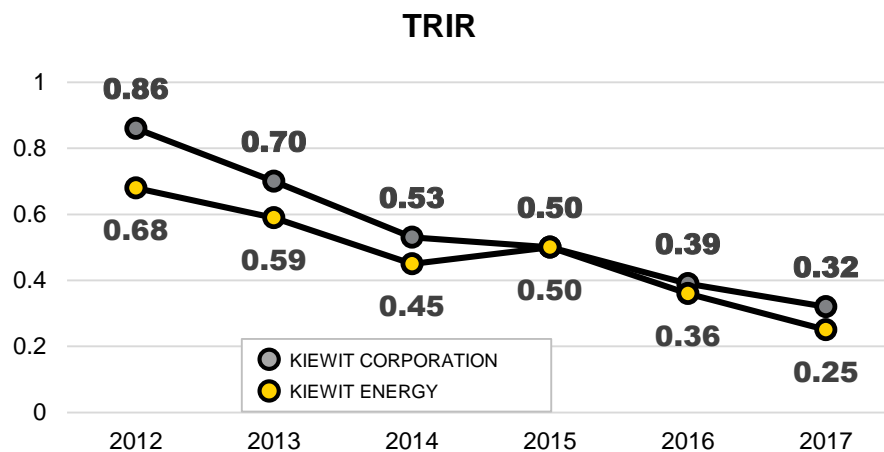
30 years after Kiewit implemented a safety culture, OSHA was signed into law (1970)

**1940** Adopted the motto “**THINK SAFETY**”

**1948** Made **HARD HATS MANDATORY**

**1951** Employed **FULL-TIME SAFETY MANAGER**

**1958** Deployed a comprehensive **SAFETY TRAINING PROGRAM**



## LEADER

### INDUSTRY LEADER OF SAFETY

Today, Kiewit continues to implement programs to ensure top safety performance

**2011** Developed “**NOBODY GETS HURT**” motto

**2012** Began staffing **CRAFT SAFETY ADVISORS** on project sites

**2013** Created **MINING THE DIAMOND** incident program

**2014** Formed **CRAFT VOICE IN SAFETY** jobsite committee

Reuters

MOTIVA COMPLETE  
BILLION GULF COAST  
REFINERY EXPANSION

Business Report

AS COST OVERRUNS  
GULF COAST PROJECT  
OWNERS LOOK FOR

Anyone in industry will tell you cost overruns are the norm rather than the exception in the dynamic world of refinery and chemical plant construction. Capital projects almost always cost more and take longer than original plans proposed.

The causes are as recognizable as they are plentiful: insufficient planning and inaccurate estimating, poor controls, ineffective management, inadequate communications, contract ambiguity, cash constraints, poor productivity and a lack of

adequate skilled labor, a few. Although certain a new problem, cost overruns have taken a more serious turn following the Great Recession and the various solution best practices, along with their pros and cons, have become favorite topics in

November 03, 2016

Houston Chronicle

CONTRACTOR TAKES \$154  
MILLION HIT ON DELAYED  
PETROCHEMICAL PROJECT  
NEAR HOUSTON

FC Business Intelligence

PROJECT STATUS UPDATES  
CHEVRON PHILLIPS:

CPCHEM'S U.S. GULF COAST PETROCHEMICALS  
PROJECT WILL COST AN ADDITIONAL 5-10%

CPCHEM's U.S. Gulf Coast Petrochemicals Project will cost an additional 5-10%, \$250 million to \$500 million, due to construction delays, Greg Garland, Chairman & CEO of Phillips 66, which owns a 50% share in the joint venture, said

in a Q3 earnings call. Speaking alongside Garland, President Timothy Taylor explained that each contractor has a different workforce, and that while the polyethylene aspect of the project will be completed on time and budget, the ethane

cracker had been more of a struggle. CPCHEM has since reorganized the way it works with the contractor, and is now seeing better productivity, he said. The plant was 85% complete as of the end of October 2016, according to

Garland, with the polyethylene business on track to start by mid-2017, and the ethane cracker to start up in the second half of the year.

April 22, 2013

CNBC

CH KOREAN BUILDERS  
CE FOR LOSSES AS  
AS PROJECTS GO SOLID

the 2008 financial crisis, Korean build

November 24, 2017

Moneyweb

COST OVERRUNS  
SOL'S \$11BN LAKE  
CHARLES PROJECT

ESTORS WHO EXPECTED THE INVESTMENT  
ANA WOULD BE AN EARNINGS FILLIP.

# GULF COAST LABOR SHORTAGE

**\$350 BILLION**  
in CAPEX through 2025

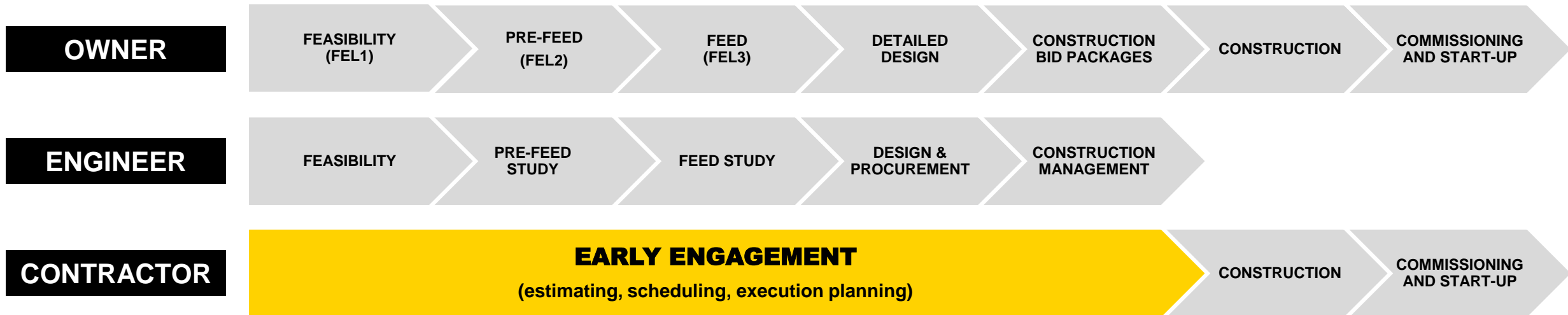
**78,000**  
craft required annually  
to build these jobs

**73,000**  
craft currently  
available in Gulf Coast





# EARLY CONTRACTOR ENGAGEMENT



# EARLY ENGAGEMENT ADVANTAGES



## **Integrates EP+C at early stages of project development**

- Integrated schedule with sequence, proper logic and resource loaded
- Starts with turnover/commissioning and work backwards
- Aligns systems, tools and processes



## **Initiates advanced work packaging early**

- Creates architecture early and drives schedule
- Establishes tighter engineering deliverables and manpower budget
- Construction-led



## **More accurate AFE estimate**

- Contractor prepares estimate
- Quantity based vs. factored
- Alignment around design allowances
- Schedule reflects estimate and vice versa



## **Identifies project risks and mitigations early, and consistently**

- Risks are discussed, priced, mitigated and scheduled transparently
- Considered with ultimate stakeholder input
- Risk register kept live through FEL phases



# BUILDING PROJECT CONFIDENCE

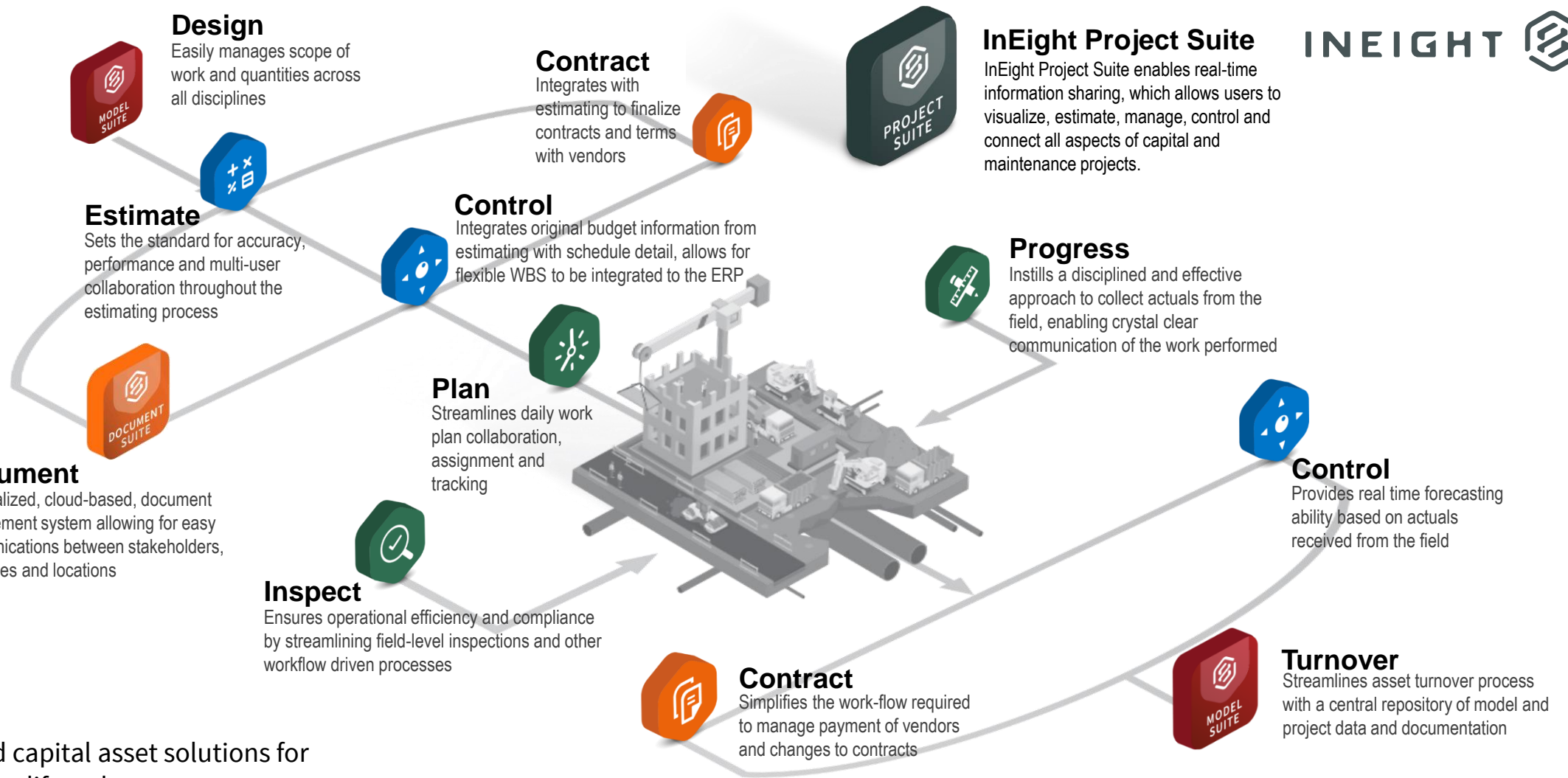
InEight is a leader in construction project management software, with solutions spanning from model to estimate and from field execution to turnover.



**25,000**  
USERS

**750**  
COMPANIES

**33**  
COUNTRIES



Construction and capital asset solutions for your entire project lifecycle

**InEight® Project Suite**  
*Proven Project Certainty*



### Platform

Modern, configurable, interoperable and standards-based foundation that connects the InEight Project Suite to 3rd-party applications such as CAD, ERP/accounting, reporting, and document management



### Reports & Dashboards

Managers can quickly gather data from active projects and generate the KPI-driven reports and dashboards needed to identify issues and make more informed decisions



# COVE POINT LNG EXPORT TERMINAL

*Lusby, MD*

## Owner

Dominion Energy

## Engineer

IHI Corporation

## Manhours /

## Peak Manpower

13,000,000 / 3,000

## Project Description

5 MTA liquefaction facilities for exporting LNG, conversion of existing Cove Point LNG import unit

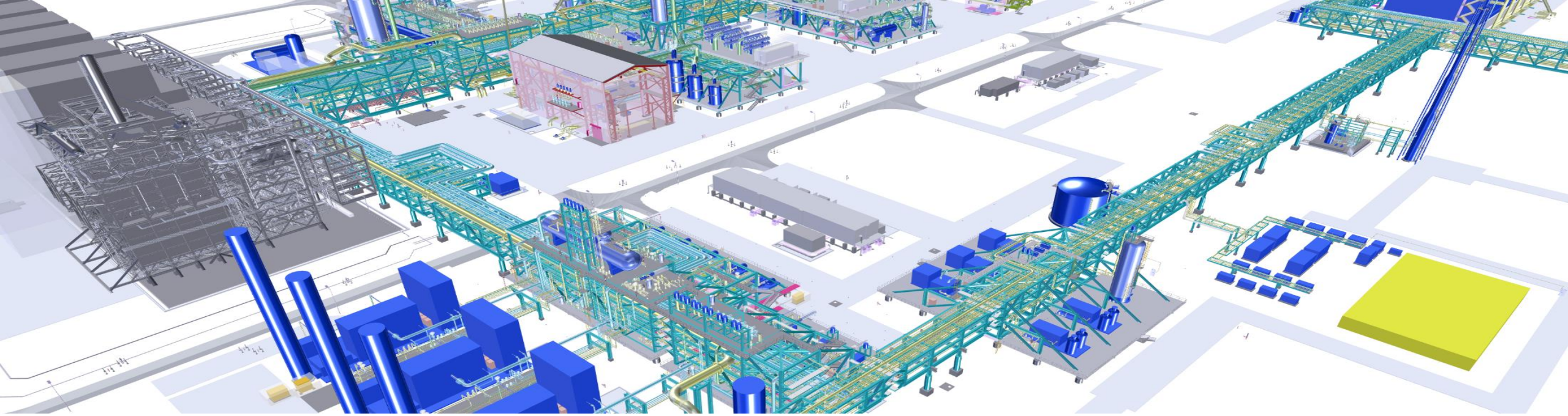
## Project Duration

June 2014 – April 2018

*Completed on budget and on schedule*

## Quantities

Concrete	96,000 CY
Pipe	142,000 LM
Steel	18,000 MT
Valves	15,000 EA
Conduit	116,000 LM
Cable	1,669,000 LM
Terminations	191,000 EA



# GCGV OLEFINS RECOVERY PROJECT

## Owner

Gulf Coast Growth Ventures  
(ExxonMobil/SABIC)

## Location

Gregory, TX (site);  
Penglai, China (mod yard)

## Description

1.8 MT ethylene plant along with two derivative units:  
two 600 KT polyethylene and one 600 KT  
monoethylene glycol.

## Duration

June 2018 - October 2021



**Kiewit**

**THANK YOU**