RICE ANNUAL FORUM

David Claggett, Senior Vice President, Kiewit Energy Group
MOBILE WORKFORCE

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

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

- **22%** OIL, GAS & CHEMICAL
- **31%** TRANSPORTATION
- **13%** BUILDING
- **13%** MINING
- **8%** WATER/WASTEWATER
- **22%** POWER

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
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%
$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

OWNER

FEASIBILITY (FEL1) -> PRE-FEED (FEL2) -> FEED (FEL3) -> DETAILED DESIGN -> CONSTRUCTION BID PACKAGES -> CONSTRUCTION -> COMMISSIONING AND START-UP

ENGINEER

FEASIBILITY -> PRE-FEED STUDY -> FEED STUDY -> DESIGN & PROCUREMENT -> CONSTRUCTION MANAGEMENT

CONTRACTOR

EARLY ENGAGEMENT
(estimating, scheduling, execution planning)

CONSTRUCTION -> COMMISSIONING AND START-UP
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
InEight is a leader in construction project management software, with solutions spanning from model to estimate and from field execution to turnover.
InEight® Project Suite
Proven Project Certainty

Construction and capital asset solutions for your entire project lifecycle
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
THANK YOU