Providing global market intelligence on the industrial market for over 36 years.

Our industry coverage encompasses energy, power industrial processing and heavy manufacturing sectors.
<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>O &amp; G PRODUCTION</strong></td>
<td>Onshore and offshore oil &amp; gas processing, LNG export terminals, gas-to-liquids</td>
</tr>
<tr>
<td><strong>O &amp; G PIPELINES</strong></td>
<td>Onshore and offshore crude oil, condensate, gas &amp; refined products</td>
</tr>
<tr>
<td><strong>O &amp; G TERMINALS</strong></td>
<td>Storage facilities, LNG receiving &amp; regasification</td>
</tr>
<tr>
<td><strong>PETROLEUM REFINING (HPI)</strong></td>
<td>Refineries, lube oil plants and asphalt plants</td>
</tr>
<tr>
<td><strong>CHEMICAL PROCESSING (CPI)</strong></td>
<td>Petrochemical, agricultural, industrial gases, organic &amp; inorganic chemicals</td>
</tr>
<tr>
<td><strong>ALTERNATIVE FUELS</strong></td>
<td>Ethanol, biodiesel, coal gasification, fuel pellets</td>
</tr>
<tr>
<td><strong>ELECTRIC POWER</strong></td>
<td>Generation, transmission &amp; distribution</td>
</tr>
<tr>
<td><strong>METALS &amp; MINERALS</strong></td>
<td>Mines, mills and processing plants</td>
</tr>
<tr>
<td><strong>PULP, PAPER &amp; WOOD</strong></td>
<td>Mills, forest products &amp; converting plants</td>
</tr>
<tr>
<td><strong>FOOD &amp; BEVERAGE</strong></td>
<td>Processing &amp; distribution/storage facilities</td>
</tr>
<tr>
<td><strong>PHARMACEUTICAL &amp; BIOTECH</strong></td>
<td>Manufacturing facilities and research laboratories</td>
</tr>
<tr>
<td><strong>INDUSTRIAL MANUFACTURING</strong></td>
<td>Durable and non-durable goods manufacturing</td>
</tr>
</tbody>
</table>
We continue to challenge ourselves to help our customers navigate through the complexities of today’s markets.
U.S. Plant Spending Forecast
Soft Landing from Mega-Projects

2019 Capital & Maintenance: $329.9 Billion, revised down from $334 billion
Representing a 0.7% Increase from 2018

Tail Winds
• Macro Economy Momentum
• Consumer Sentiment High
• FED Flexibility
• NAFTA-TO-USMCA
• Rising Oil & Gas Output

Head Winds
• Government Shutdown
• China Tariffs Hit Home
• Rising Costs
• 10%+ Correction in Equities
• The End of the Expansion
• No sign of Labor Relief

Industrial plant spending statistics are sourced from IIR's Top Line Spending Forecast representing all forms of capital and maintenance activity within the (12) industrial markets covered by IIR. Forecasts are updated on a quarterly basis with validation at the plant level.
U.S. Shale Revolution
Industrial Market Spending Driver

INPUT BENEFICIARIES

- Drill Pipe Fabrication
- Steel Pipe/Tube Mills
- High-Velocity Fluids
- Frac Sand Mines
- Fracturing Equipment Producers
- Proppant Producers

Output Beneficiaries

Bakken, Eagle Ford, Permian, Utica Marcellus, Niobrara

- Power Generation
- Midstream Processing
- Fertilizer Plants
- Storage Terminals
- Ethylene Capacity
- Petroleum Refineries
- Gas to Liquids
- Fertilizer Plants
- LNG Export Market
- Methanol
- Market
- Petrochem Refineries
- Manufacturing
- Paints Coatings
- Micro-LNG Domestic Market
- Chemical Industry
- Textile
- Ethylene Capacity
- Downstream Petrochem
- Power Generation
- Electronic
- Ceramic
- Still Viable with Low Crude Prices

2,558 Projects @ $182 billion
2007 - 2014

Still Viable with Low Crude Prices
20 million + Hours

High Demand Areas include: San Francisco & Los Angeles, CA Metro, Charlotte & Raleigh, North Carolina Metro, Beaumont, Corpus Christi, Dallas, Houston, and Midland/Odessa TX Metro, Baton Rouge, Lake Charles, and New Orleans, LA Metro, Columbus & Toledo, OH Metro, Pittsburgh, PA Metro, Atlanta & Augusta, GA Metro, Detroit, MI Metro, Chicago, IL Metro.

2019+2020 = 1.60 Billion Hours
• Economic momentum continues without major disruption

• 2020 could be our downturn year after 10 years of recovery and expansion – Moderate, Not Recession

• Oil & Gas Midstream markets remain strong – exports grow

• Natural Gas-based industries leverage cheap feedstock

• Consumer spending weakness (2020/2021) impacts specific industries
The Gulf Coast will continue to see a deficit in the tens of thousands of workers in any given year over the next 5 years.

As craft labor demand continues to grow, so do the deficits in soft crafts (Insulators, Painters, Carpenter and Scaffold Builders)
Owners and contractors are increasing their training programs for workers and changing their crew mix to allow for more helpers or apprentices.

Training programs are being re-introduced into the local high schools in many areas to give students other options or opportunities for career paths.

Companies are also changing up the compensation models to draw and retain the high skilled labor.

Modular builds are coming into play, but not at a rate that will change the labor dynamics we are currently seeing.
Thank You!
Questions?

www.industrialinfo.com