Presentation to the Louisiana PSC

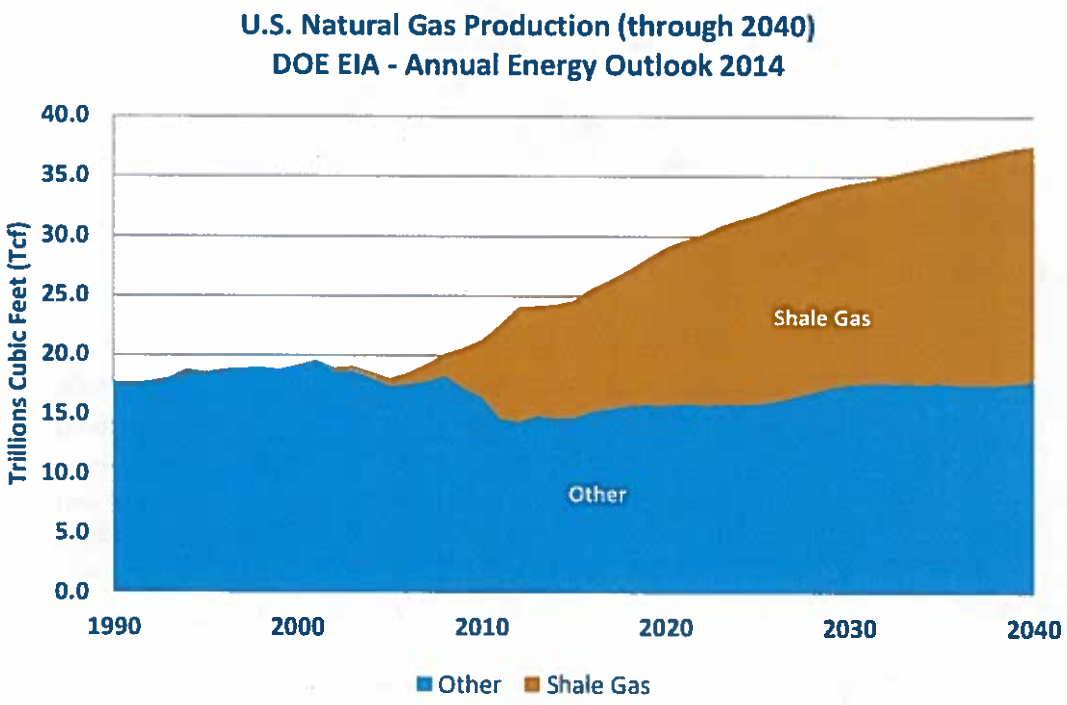
CB&I Power

November 6, 2014

Agenda

- U.S. Natural Gas and Shale Gas Production Outlook
- U.S. Gulf Region Industrial Activity Outlook
- IIR – Forecast of Gulf Region Industrial Investment
- IIR – Forecast of Gulf Region Craft Requirements
- CB&I – Forecast of Gulf Region Craft Requirements
- CB&I – Forecast of Gulf Region Pipe Fabrication Requirements
- U.S. Power Outlook
- Wrap Up and Discussion

U.S. Natural Gas and Shale Gas Production Outlook



- DOE forecasts more than 2x increase in U.S. Gas production to 37.3 Tcf by 2040.
- All of this production increase results from Shale Gas development.
- Rapid growth in Gas production is forecast to make the U.S. a net exporter by 2020.
- Gas exports rise to 5.8 Tcf making up 18% of total production by 2040.

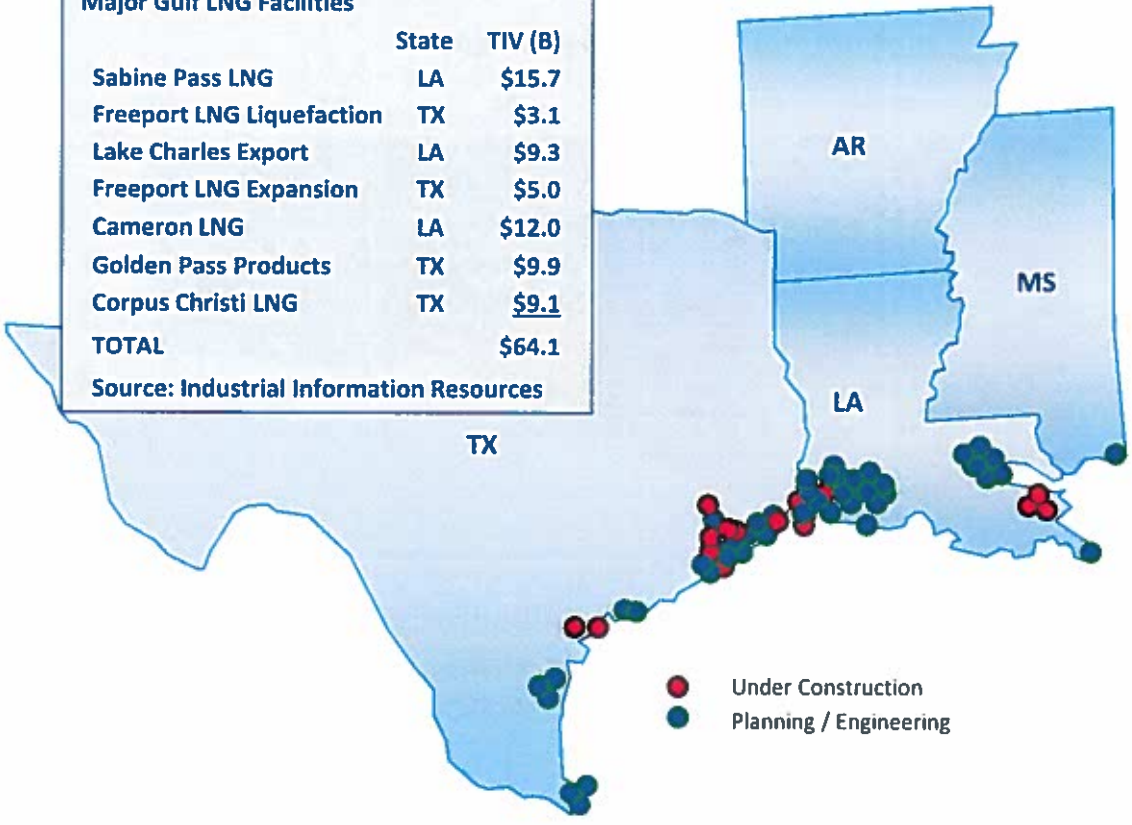
Source: U.S. DOE EIA - Annual Energy Outlook 2014 (Reference Case)

U.S. Gulf Region Industrial Activity Outlook

Major Gulf LNG Facilities

	State	TIV (B)
Sabine Pass LNG	LA	$15.7
Freeport LNG Liquefaction	TX	$3.1
Lake Charles Export	LA	$9.3
Freeport LNG Expansion	TX	$5.0
Cameron LNG	LA	$12.0
Golden Pass Products	TX	$9.9
Corpus Christi LNG	TX	$9.1
TOTAL		$64.1

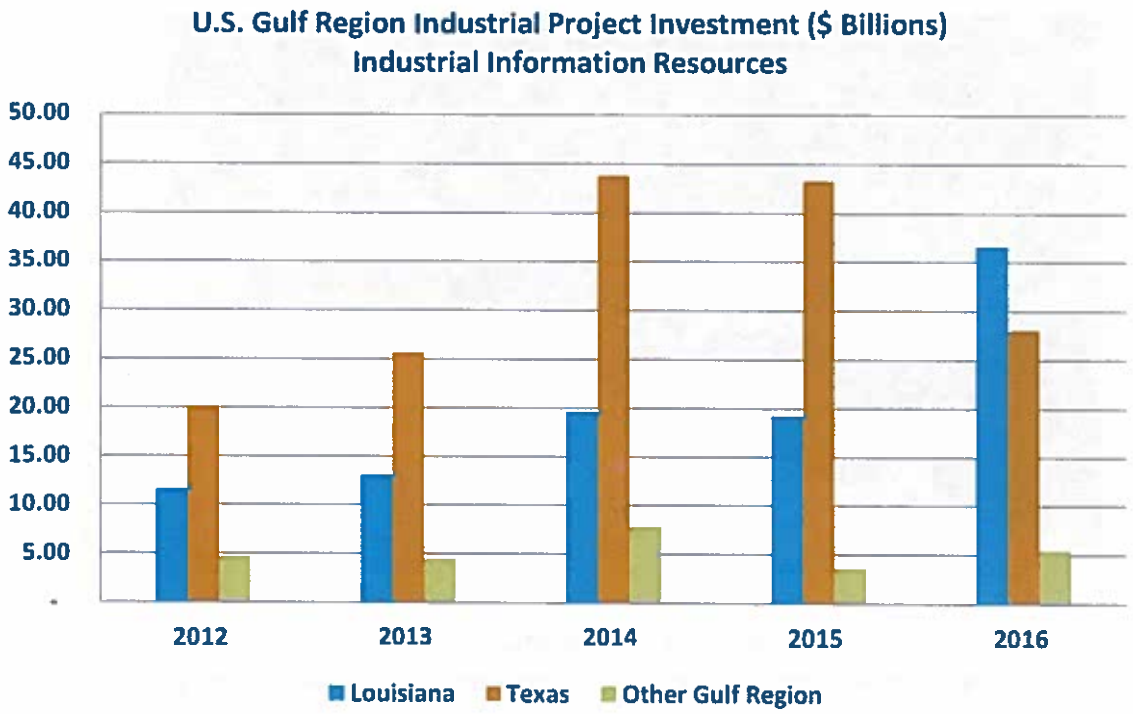
Source: Industrial Information Resources



- Availability of abundant, low cost Gas is driving $ Billions in new Gulf Region investment.
- Gulf Region LNG facilities totaling more than $60B are currently in advanced development stage.
- Dozens of Oil & Gas, Chemicals, and Power projects in excess of $1 B are scheduled to begin by 2016.

Source: Industrial Information Resources, CB&I Power analysis

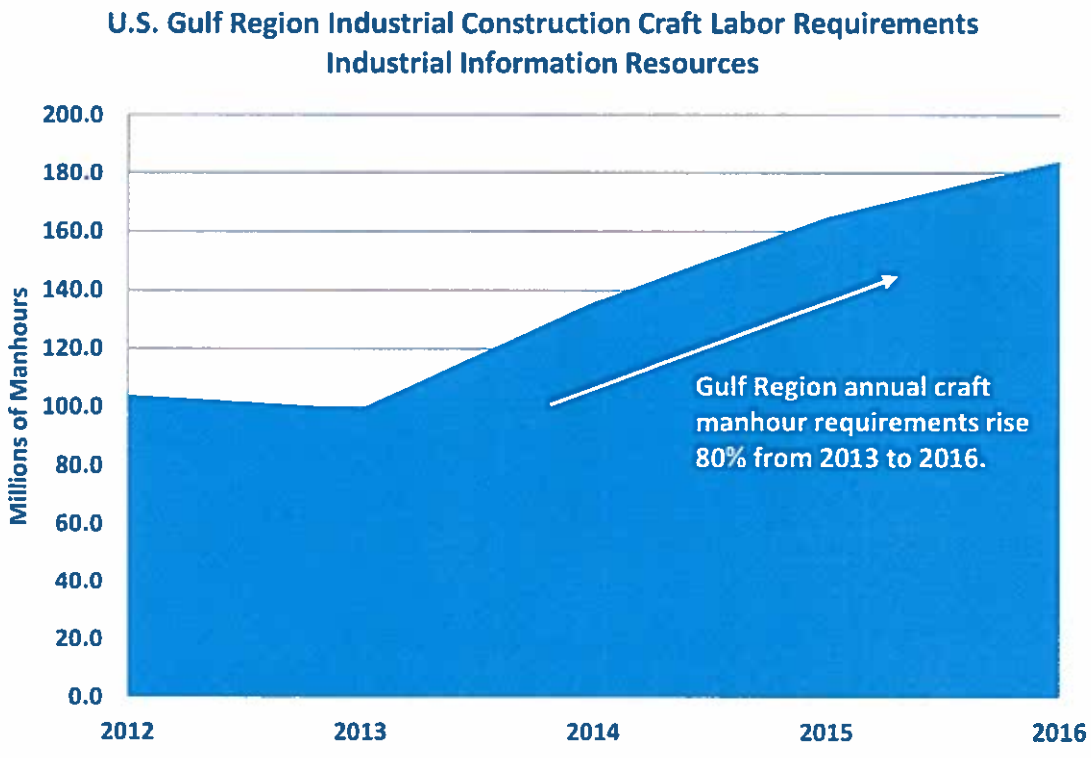
IIR – Forecast of Gulf Region Industrial Investment



- IIR forecast of likely industrial projects shows more than 50% increase in Gulf Region investment.
- The bulk of this new activity resides in two states -- Louisiana and Texas.
- Includes LNG, Refinery, Chemicals, and Power along with other industrial activity.

Source: Industrial Information Resources, CB&I Power analysis

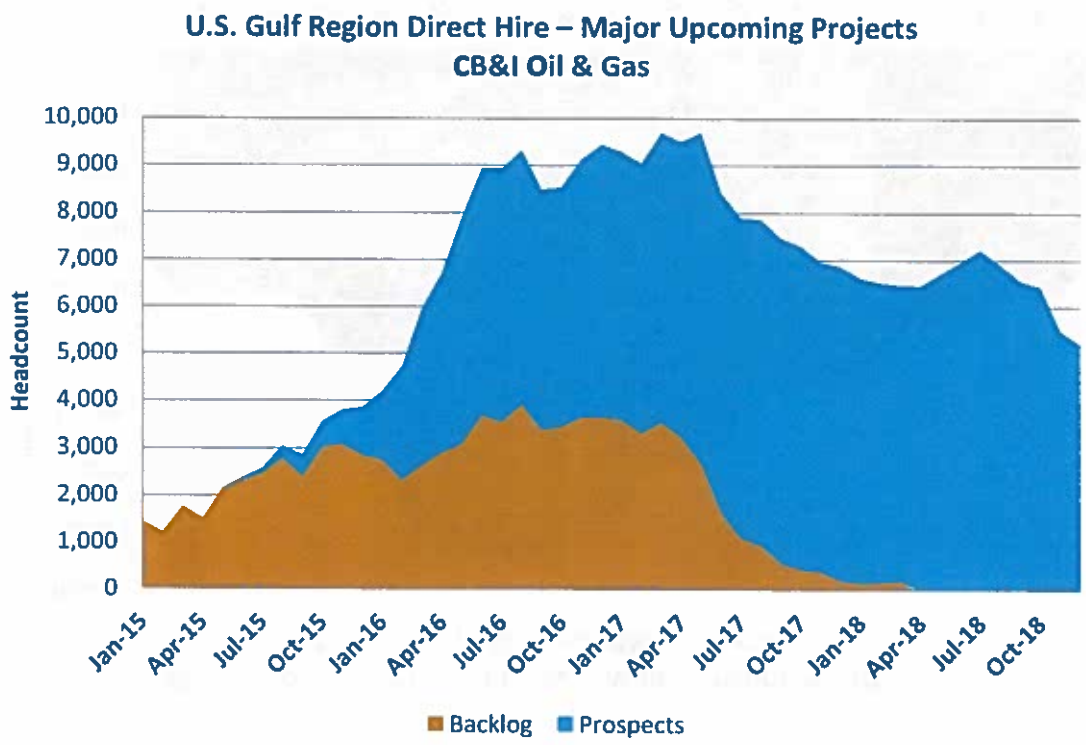
IIR – Forecast of Gulf Region Craft Requirements



- IIR forecast of craft labor requirements shows similar ramp up for this period.
- Gulf Region annual craft manhour needs grow more than 80% by 2016.
- IIR projects resulting labor deficits in key Gulf Region markets (e.g., Lake Charles, Corpus Christi).

Source: Industrial Information Resources Labor Demand Forecast

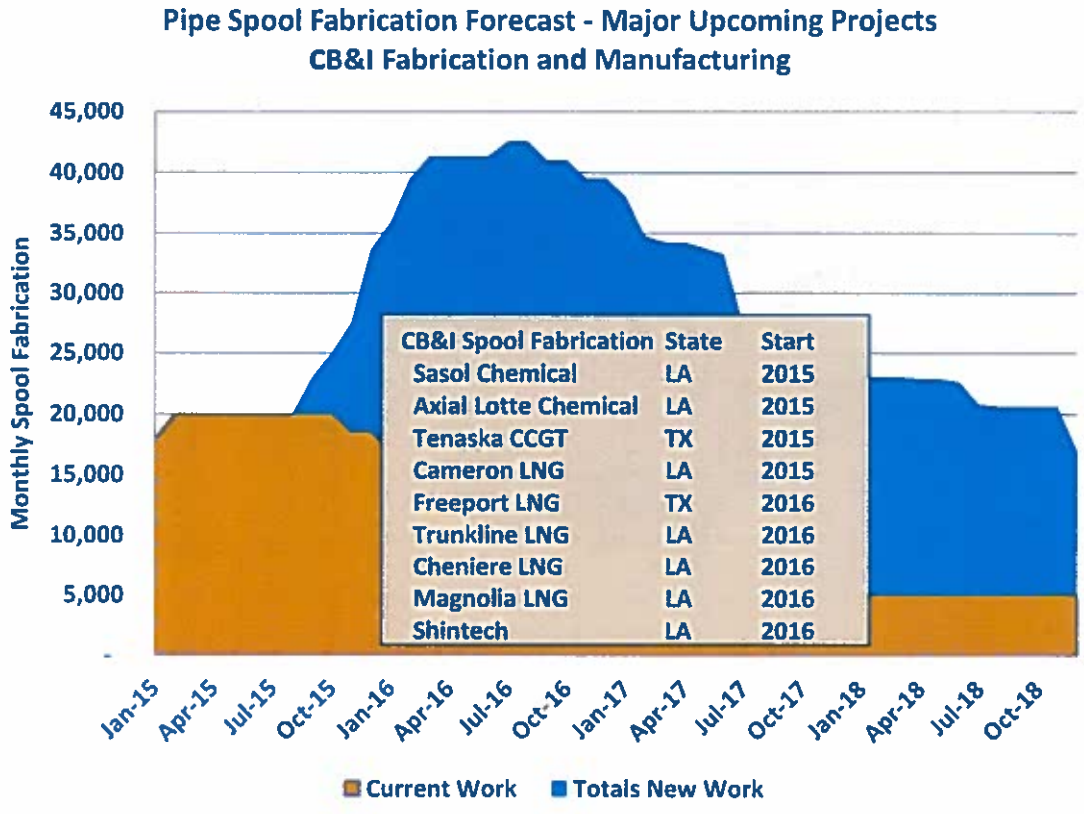
CB&I – Forecast of Gulf Region Craft Requirements



- As EPC contractor for among the largest of these Gulf Region projects, CB&I is preparing to hire up to 10,000 craft in the next two years.
- Currently establishing operations for attracting, recruiting, and training needed staff.
  - Targeted recruiting centers
  - Technical training colleges
  - Online, billboard and radio advertising

Source: CB&I analysis

CB&I – Forecast of Gulf Region Pipe Fabrication Requirements



CB&I Spool Fabrication	State	Start
Sasol Chemical	LA	2015
Axial Lotte Chemical	LA	2015
Tenaska CCGT	TX	2015
Cameron LNG	LA	2015
Freeport LNG	TX	2016
Trunkline LNG	LA	2016
Cheniere LNG	LA	2016
Magnolia LNG	LA	2016
Shintech	LA	2016

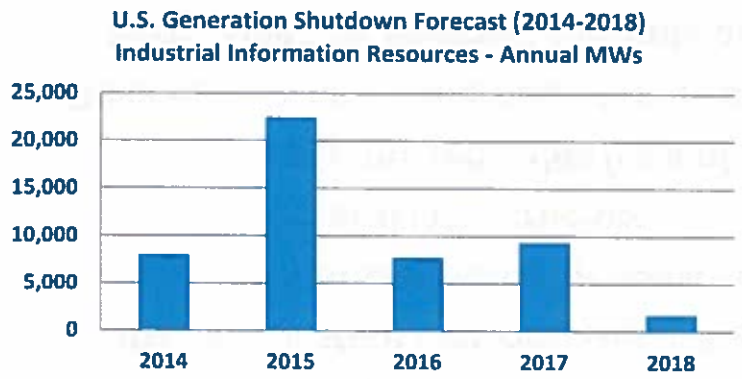
- CB&I Fabrication and Manufacturing is preparing for the busiest period in Company history.
- As the largest U.S. pipe fabricator, CB&I expects large utilization of available capacity by 2016. Plans are in place to add capacity.
- Upcoming major Gulf Region LNG, Chemical, and Power projects could total more than 1M pipe spools.

Source: CB&I analysis

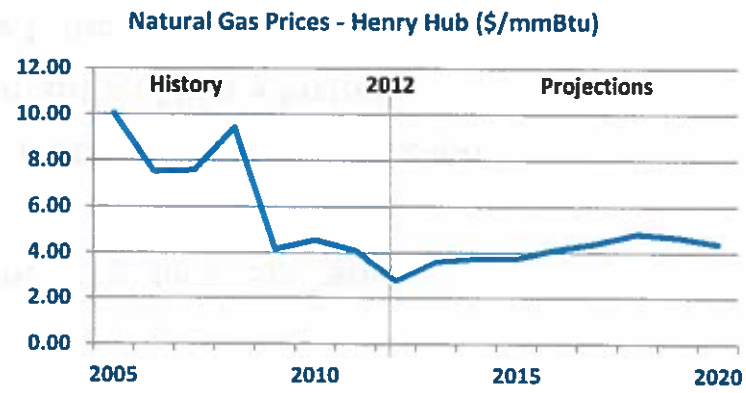
U.S. Power Outlook

- **U.S. Power markets currently focused on development of combined cycle generation. Replacing shutdown capacity and taking advantage of sustained low Gas pricing.**

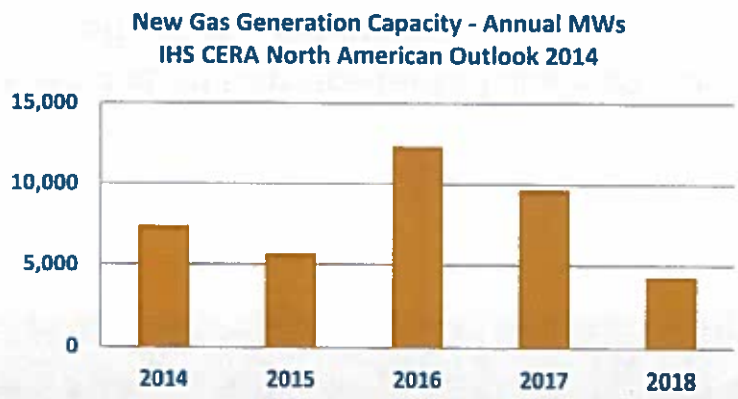
Improving load growth in select markets and generation capacity shutdowns…



And sustained low Gas pricing…



Driving development of Gas combined cycle generation.



Wrap Up and Discussion

- The Gulf region is experiencing an unprecedented shale gas driven industrial expansion that is likely to continue if effectively supported.
- Our experience is that significant factors in the decision to undertake industrial development include:
  - Strength of state and local support
  - Availability of workforce for construction and long-term operation
  - Strength of local infrastructure
  - Confidence in the reliability/cost of electrical generation/transmission.
- Challenges to new generation facility development will likely include:
  - Permitting and approval certainty and cycle times
  - Securing engineered equipment and critical commodity purchases and delivery in a market with increasing North American demand
  - Optimizing engineering and construction durations
  - Developing, retaining and coordinating needed craft and technical resources.