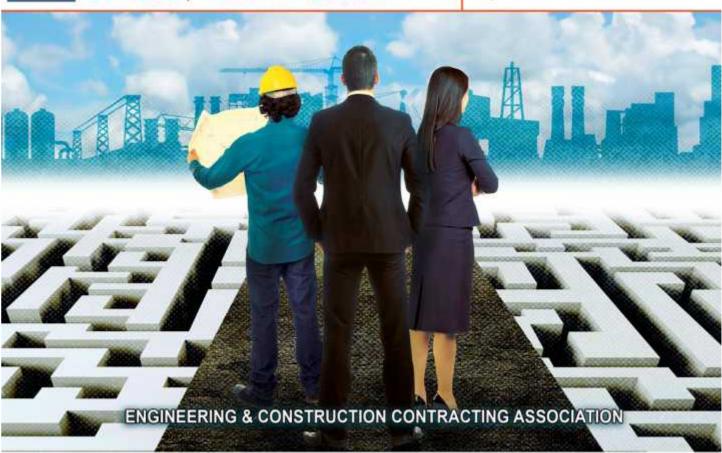
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Optimized Owner – Contractor Risk Sharing

Assigning Risks Where They Can Best be Managed

Steve Wardle – Facilitator

Scott Sharp – Owner Representative

Harvey Vigneault – Contractor Representative



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Assigning Risks Where They Can Best be Managed



Scott Sharp

Senior Vice President Projects – Chevron Phillips Chemical Company LP

Scott Sharp

- Over 35 years in the industry
- Mega project sponsor experience USGC and International
- SVP, VP, various manufacturing and operations management positions with Standard Oil, Chevron Chemicals and Chevron Phillips Chemicals
- JV and consortium experience with various risk-share scenarios with the EPC's



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Assigning Risks Where They Can Best be Managed



Harvey Vigneault

Chief Operating Officer – Technip Onshore North America

Harvey Vigneault

- Over 40 years in the Industry
- Over 30 years of project management
- Mega Project Experience worldwide
- SVP, VP and PM positions held with Major EPC companies
- JV, Consortium, Prime Contractor roles with EPC partners and various riskshare scenarios with Owners

Assigning Risk Where They Can Be Best Managed

Assigning EPC Risk – who is in the best position (Owner/Contractor) to control/manage these key project risk areas and why:

- 1. Engineering Services
- 2. Procurement
- 3. Craft Labor Rates
- 4. Craft Productivity
- 5. Pre-Comm and Commissioning

Assigning Risk Where They Can Be Best Managed - Background

- Lump Sum models are intended to transfer risk to Contractor – can Contractors actual carry such risk? Is the Owner seeking to transfer risk or to minimize costs?
- History shows that, ultimately, final risk resides with Owner
- Do mixed-model contracts more appropriately address balanced risk sharing?

1. Engineering Services

- Contractor core competency
- Cost of Services
- Impact on Construction
- Impact on Schedule
- Impact on Plant Performance

Who is best suited to "own" these risks to drive best behaviors, most cost effective and predictable outcomes?

2. Procurement

- EPC's and Owners have this as a core competency
- Over-committed suppliers
- Region-based supply chains
- Industry experience drain
- Performance of others (quality, cost, schedule etc....)
- Levels of inspection
- Low Cost equipment performance

2. Procurement (Contd..)

- How does purchasing (pre-EPC phase) long lead critical equipment influence this?
- How do, or don't, master service agreements of frame agreements influence this?

Who is best suited to "own" these risks to drive best behaviors, most cost-effective and predictable outcomes associated with quantities, costs, schedule and quality?



3. Craft Labor Rates

- Volatility in the market and market conditions, local and global, influence
- Current craft demographic is challenging
- Labor rates influence productivity
- High uncertainties drive high Contractor contingencies

Who is best suited to "own" this risk to drive best behaviors, most cost effective and predictable outcomes

4. Craft Productivity

- Contractors best positioned to predict and manage productivity
- Productivity is influenced by Supervisor to Craft ratios and appropriate staffing of indirect and direct labor
- High uncertainties drive high Contractor contingencies

Who is best suited to "own" this risk to drive best behaviors and steer most cost effective and predictable outcomes?

5. Pre-Comm and Commissioning

- Turnover at MC or RFSU
- Post turnover support
- Safety risks
- Challenges with simultaneous operations
- Meeting shareholder commitments

Who is best suited to "own" these risks to drive the most cost effective and predictable outcomes?



Closing Remarks / Take-aways

Risks we discussed:

- 1. Engineering Services
- 2. Procurement
- 3. Craft Labor Rates
- 4. Craft Productivity
- 5. Pre-Comm and Commissioning

Thank You



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