engineering and construction contracting association
Aligning Expectations

- Aligning Owners and Contractors Expectations!
- Key success factors & challenges
  - Project objectives and priorities
  - Approaches to reduce risk
  - Management of Scope
  - Interface management
Aligning Expectations

Rob Kelly
VP Technical Functions
Global Projects - BP

Dean Ragsdale
Principal
Ragsdale LLC

George Nash
President
Energy & Construction
URS
Do we have an Alignment Problem?

“Alignment problem? What sort of alignment problem?”
1. If Misalignment - Where is the main cause?

1. Owner Business – Scope Owner
2. Owner Procurement/Legal
3. Owner Project Team
4. Contractor Business development
5. Contractor Project Execution Team
Aligning Expectations Between Owners and Contractors

Dean Ragsdale
Principal, Ragsdale Group L.L.C.
“Alignment is the condition where appropriate project participants are working within acceptable tolerances to develop and meet a uniformly defined and understood set of project objectives.”

Construction Industry Institute (CII) Best Practice Summary: 1.02 Alignment

“... there is no known process or strategy in the industry that can be used to strategically align owner and contractor resources.”

CII Report 111-2
Generally:

Alignment between Owners and Contractors means:

• Owners get a safe high quality project with cost and schedule certainty

• Contractors deliver a safe high quality project with cost and schedule certainty
## Aligning Expectations

### Interview of Experts on Alignment Topics

<table>
<thead>
<tr>
<th>Claim Expert One:</th>
<th>Claim Expert Two:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alignment</strong></td>
<td><strong>Alignment</strong></td>
</tr>
<tr>
<td>Safety</td>
<td>Safety</td>
</tr>
<tr>
<td><strong>Misalignment</strong></td>
<td><strong>Misalignment</strong></td>
</tr>
<tr>
<td>Scope of Work – FEED Documents are not Issue for Construction Quality</td>
<td>Scope of Work – Change Management</td>
</tr>
<tr>
<td>Contractor Promises “A” Team</td>
<td>Scope of Work – Design Development</td>
</tr>
<tr>
<td>Schedule Risk – Misunderstood</td>
<td>Schedule Management – Changes</td>
</tr>
</tbody>
</table>
Aligning Expectations

Current Owner Contractor Alignment Methods

1. Contractor – Owner Alignment Sessions
   Bid Explanation, Two Way Contract Negotiation, Project Kick Off Meeting, Regular Alignment Sessions

2. Executive Sponsor Programs

3. Contract Risk Apportionment between Owner and Contractor
Aligning Expectations

Major Areas for Alignment / Misalignment

1. Safety
2. Scope of Work
3. Quality Requirement of Work
4. Schedule and Schedule Slip Risk
5. Cost and Cost Growth Risk
6. Change Management
Safety:
Measurement is very easy to understand by both Contractors and Owners.

Standard Method:
Rate/ 200K Man Hours

Alarming Expectations

Contractor
Ave. ’12 – 0.34
Owner
Ave. ’12 – 0.25
Aligning Expectations Between Owners and Contractors

George Nash
President, Energy & Construction – URS
Q: How is this project going to work out?

Owner

Project Vision
- A, B, C
- 1, 2, 3

Priorities
- Change Approach
- Risk Approach

Contractor

Project Vision
- 4, 5, 6
- C, D, F

Objectives
- Risk Approach
- Change Approach
Fact: Owner-contactor misalignment is the Achilles Heel of project management.
Much has been written about correcting owner-contractor misalignment...

**DETECTING STAKEHOLDER MISALIGNMENT**

*WRITTEN BY: George Konstantopoulos*

*Project Times - January 19, 2011*

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**Strategy Misalignment: The Symptoms, Dangers and Treatment**

*WRITTEN BY: Joe Evans*

*Method Frameworks – April 5, 2010*

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**Chronic Misalignment**

Why leadership’s calls for better organizational alignment don’t work & how a simple ‘value language’ can remove common barriers

*WRITTEN BY: Gregory Dickinson and Michael Puleo*

*Deloitte Review. n.d.*
but, in the words of Ben Franklin . . .

An ounce of prevention is worth a pound of cure
- Ben Franklin
The “ounce of prevention” is robust front-end planning . . .

1. Client Goals & Objectives
2. Client Special Requirements
3. Prepare SOW and Assumptions
4. Determine Stakeholder Roles
5. Determine Risks, Opportunities & Actions
6. Prepare Execution Strategy
7. Prepare Cost Estimate & Milestone Schedule

Close collaboration with Clients is critical throughout each step.
Industry research confirms the importance of front-end planning . . .

<table>
<thead>
<tr>
<th></th>
<th>Projects with effective front-end planning</th>
<th>Projects without effective front-end planning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10% less cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Schedule</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7% shorter schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Changes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>√ 5% fewer changes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CII research* shows that for comparable projects . . .

* Source CII Research Team 213, Sample of 609 projects with total TIC of $37B
Commercial Approach

• Spectrum of options
• The risk extremes are “turnkey” and “cost plus”
• The cost extremes are “turnkey” and “target price”
• The control extremes are “turnkey” and “cost plus”
• Owner chooses optimal cost/risk/control allocation

![Diagram showing cost/risk/control allocation with Turnkey, Cost Plus, Target Price, and Firm Fixed Price through Mechanical Completion options.]

- **Turnkey**: Min to Max
- **Firm Fixed Price through Mechanical Completion**: Owner’s Risk to Contractor’s Risk
- **Target Price**: Max to Min
- **Cost Plus**: Owner’s Contingency & Margin to Project TIC

Optimum Alignment Option

Owner’s Contingency
# Implementation and Opportunities

## Contracting – Target Pricing Success

<table>
<thead>
<tr>
<th>Customer</th>
<th>Description</th>
<th>Contract ($M)</th>
<th>Final ($M)</th>
<th>Over/Under</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Company</td>
<td>4 FGD Retrofit</td>
<td>199</td>
<td>170 (est.)</td>
<td>(14.6%)</td>
</tr>
<tr>
<td>Wisconsin Energy</td>
<td>2 FGD &amp; 4 SCR Retrofit</td>
<td>596</td>
<td>511</td>
<td>(14.3%)</td>
</tr>
<tr>
<td>Tennessee Valley Authority</td>
<td>3 x 1 GE 7FA Combined Cycle – 890 MW</td>
<td>168</td>
<td>141</td>
<td>(15.1%)</td>
</tr>
<tr>
<td>Tennessee Valley Authority</td>
<td>Nuclear Steam Generator Replacement</td>
<td>173</td>
<td>170</td>
<td>(7.7%)</td>
</tr>
<tr>
<td>Public Service of New Hampshire</td>
<td>FGD</td>
<td>330</td>
<td>301</td>
<td>(9.0%)</td>
</tr>
<tr>
<td>Entergy</td>
<td>Nuclear Steam Generator Replacement</td>
<td>192</td>
<td>185</td>
<td>(3.6%)</td>
</tr>
<tr>
<td>Constellation Energy</td>
<td>2 FGD</td>
<td>551</td>
<td>551</td>
<td>0.0%</td>
</tr>
<tr>
<td>Detroit Edison</td>
<td>2 FGD</td>
<td>364</td>
<td>365</td>
<td>0.3%</td>
</tr>
<tr>
<td>Wisconsin Valley Authority</td>
<td>2x1 SW 501F Combined Cycle – 500 MW</td>
<td>255</td>
<td>331</td>
<td>(29.8%)</td>
</tr>
<tr>
<td>PSE&amp;G</td>
<td>1 FGD, SCR &amp; ACI</td>
<td>767</td>
<td>781</td>
<td>1.8%</td>
</tr>
<tr>
<td>PSE&amp;G</td>
<td>1 FGD, SCR &amp; ACI</td>
<td>43</td>
<td>43</td>
<td>(0.0%)</td>
</tr>
<tr>
<td>Monongahela Energy</td>
<td>2 FGD Retrofit</td>
<td>242</td>
<td>245</td>
<td>1.2%</td>
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<tr>
<td>Tennessee Valley Authority</td>
<td>2 FGD Retrofit</td>
<td>403</td>
<td>403</td>
<td>0.0%</td>
</tr>
<tr>
<td>Tennessee Valley Authority</td>
<td>1 FGD Retrofit</td>
<td>224</td>
<td>222</td>
<td>3.6%</td>
</tr>
<tr>
<td>Pacific Gas &amp; Electric</td>
<td>Nuclear Steam Generator Replacement</td>
<td>228</td>
<td>253</td>
<td>(12.2%)</td>
</tr>
<tr>
<td>Exelon Corp</td>
<td>Nuclear Steam Generator Replacement</td>
<td>166</td>
<td>155</td>
<td>(6.6%)</td>
</tr>
<tr>
<td>Reliant</td>
<td>1 FGD Retrofit</td>
<td>292</td>
<td>301</td>
<td>3.1%</td>
</tr>
<tr>
<td>Salt River Project</td>
<td>400 MW Coal Project</td>
<td>59</td>
<td>64</td>
<td>8.5%</td>
</tr>
<tr>
<td>Allegheny Energy</td>
<td>3 FGD Retrofit</td>
<td>298</td>
<td>337</td>
<td>13.1%</td>
</tr>
<tr>
<td>PSEG</td>
<td>Nuclear Steam Generator Replacement</td>
<td>131</td>
<td>138</td>
<td>5.3%</td>
</tr>
<tr>
<td>Wisconsin Electric</td>
<td>2x1 GE 7FA Combined Cycle – 500 MW</td>
<td>106</td>
<td>101</td>
<td>(4.7%)</td>
</tr>
<tr>
<td>Wisconsin Electric</td>
<td>2 FGD &amp; SCR Retrofit</td>
<td>229</td>
<td>242</td>
<td>5.7%</td>
</tr>
<tr>
<td>Detroit Edison</td>
<td>SCR Retrofit</td>
<td>110</td>
<td>104</td>
<td>(5.5%)</td>
</tr>
<tr>
<td>Wisconsin Electric</td>
<td>2x1 GE 7FA Combined Cycle – 500 MW</td>
<td>186</td>
<td>204</td>
<td>9.7%</td>
</tr>
<tr>
<td>Ameren UE</td>
<td>Nuclear Steam Generator Replacement</td>
<td>111</td>
<td>105</td>
<td>(5.4%)</td>
</tr>
<tr>
<td>Entergy</td>
<td>Nuclear Steam Generator and Reactor SGR and Vessel Head Replacement</td>
<td>102</td>
<td>95</td>
<td>(6.9%)</td>
</tr>
<tr>
<td>Detroit Edison</td>
<td>SCR Retrofit</td>
<td>124</td>
<td>120</td>
<td>(3.2%)</td>
</tr>
<tr>
<td>Wisconsin Electric</td>
<td>SCR Retrofit</td>
<td>41</td>
<td>41</td>
<td>0.0%</td>
</tr>
<tr>
<td>Detroit Edison</td>
<td>SCR Retrofit</td>
<td>126</td>
<td>132</td>
<td>4.8%</td>
</tr>
<tr>
<td>Detroit Edison</td>
<td>4x1 GE 7EA Simple Cycle – 320 MW</td>
<td>37</td>
<td>37</td>
<td>0.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,903</td>
<td>6,877</td>
<td>(0.38%)</td>
</tr>
</tbody>
</table>

* Cost Reimbursable

**Executed nearly $7 billion in work, with an accrued result of (0.38%) below budget**
## Owner-contractor alignment do’s and don’ts

<table>
<thead>
<tr>
<th>Element</th>
<th>Do’s</th>
<th>Don’ts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope</strong></td>
<td>• Ensure scope defined in detail or if not, then initiate an initial phase to define the scope collaboratively</td>
<td>• Proceed into an EPC/CM project with poorly defined scope</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>• Place project risk with the party that has most control over the outcome</td>
<td>• Assume both parties share a common vision of risk</td>
</tr>
<tr>
<td><strong>Frontend Planning</strong></td>
<td>• Take time in the frontend planning to ensure scope is well defined, roles and risks are understood, and a sound execution strategy and plan is developed</td>
<td>• Jointly give frontend planning short shrift in order to get shovels in the ground</td>
</tr>
<tr>
<td><strong>Communication and Trust</strong></td>
<td>• Establish open, trusting communication</td>
<td>• Allow “us vs. them” culture to develop</td>
</tr>
<tr>
<td><strong>Surprises</strong></td>
<td>• Prevent surprises through disciplined and effective project controls and regular joint project meetings</td>
<td>• Drop “bombshells” in interface meetings</td>
</tr>
<tr>
<td><strong>Change Control</strong></td>
<td>• Establish the change control philosophy and methods upfront</td>
<td>• Jointly confuse management of funding with change control</td>
</tr>
</tbody>
</table>
Scope of Work:

- Process Flow Diagrams
- Piping & Instrument Diagrams
- Electrical One Line
- Plot Plans
- Written Standards and Specifications

Owner Measurement: IPA Front End Loading
Contractor Measurement: Unknown
Quality Requirements of Work

- Quantitative
- Individually Defined / Corporately Defined
- Quality Systems – ISO 9000s
- Lagging Indicator: Re-performance of work

Owner Measurement: Unknown  Contractor Measurement: Defective Welds
Aligning Expectations

Rob Kelly
VP Technical Functions Global Projects
BP
Owners View

• Safe Predictable Delivery
  - Quality, Cost & Schedule

• No Surprises
  - Alignment around objectives important
Owners View – What gets in way?

- Scope – is it well enough defined?
- Perspective of “what good looks like”
- Allocation of risk – appropriate?
- Different business and financial drivers
- Custom-built versus Standard solutions
Owners View to Improve Alignment

• Fewer/Deeper Relationships
  - Repeat business with fewer providers – Global Agreements
  - Get to know how to work well together
  - Current performance = Future business
  - Build Trust: willingness to listen & act on input
  - Seeking advice from contractors on how to do better based on their broader perspective
Fewer/Deeper Relationships – How?

• Get aligned at the top
  - Personal relationships do matter
  - Regular Executive Meetings - Portfolio review
  - Discuss portfolio performance & priorities
  - Listen & take action to improve
  - Resistance to Change Management (Scope)
Fewer/Deeper Relationships – How?

• Connect Bridge to Engine Room on Project
  - Right Project Leadership is critical – blocking/bad behaviors won’t survive
  - Be very clear on roles & expectations
  - Owner accountable for setting vision & project governance
  - Contractor accountable for delivery of the agreed milestones
Fewer/Deeper Relationships – How?

- **Connect Bridge to Engine Room on Project**
  - Kick-off Alignment Workshop – set tone
  - Project Sponsors meetings
  - War Rooms – measure the right things
  - Build Culture - escalate areas of misalignment to management for resolution
Aligning Expectations

• “Don’t make perfect the enemy of good”
  - Voltaire : French Philosopher (1694-1778)
Aligning Expectations

Schedule and Schedule Slip Risk

- Work Completion Date
- Visual Work Durations
  - MS Project*
  - Primavera*
- Poor to No Risk Apportionment
- Contract Type: Reimbursable – Owner Risk; Lump Sum – Contractor Risk
Cost and Cost Growth Risk:

- Contract Cost - Variable
- Poor to No Risk Apportionment
- Owner Profit Margin – 8 to 30%
- Contractor Profit Margin – 6 to 25%
- Contract Type: Reimbursable – Owner Risk; Lump Sum – Contractor Risk
Change Management:

- Missing Change Process
- Often Critical to Profitability
- Owner wants No Change
- Contractor wants No Change
- Change Board of Owner and Contractor
engineering and construction contracting association