Project Engineering, Procurement and Construction in Russia

Andrei Kalyuzhnov
General Manager, LLC Foster Wheeler
Global E&C Group

Approximately 10,000 E&C personnel world-wide

- Main engineering centres
- Global High Value Execution Centre
- Regional/local engineering centres
- Sales offices
Project Delivery Model

- Process Design
- Engineering & Design
- Procurement & Material Control
- Construction Contracts
- Fabrication Management
- Site Management
- Completion & Handover Mgmt
Common challenges

- Well established and mature “Russian design and project execution style”
- Difficult to recognise the “reimbursable” concept, most projects are Lump Sum
- Time and schedule of project implementation represent an issue
- ITBs require provision of documentation and prices in a very short period, in Russian
- Construction used to be always local, now some changes start to occur
- Most Clients do not speak any foreign language
- Changes of written and unwritten rules and regulations
The cornerstone of any capital project is the preFEED study.
The established project development steps for a complex downstream project in Russia are:
- Feasibility Study and Basic Design Package by Western Contractor
- then Engineering (DD and WD) by local RDIs,
- Material Procurement and Construction managed directly by the final Owner

**Traditional segments of work executed by Western Engineering Companies**

Feasibility Studies
Licenses
Consultancies
Basic Design Packages
PMC
Specialist Equipment supply
Downstream Sector – Scope of Work division

Engineering Volume of Work

10%
FS => PDP => PMC

90%
FEED => Detailed Engineering

These activities are done in accordance to the Western philosophies and norms and not much affected by the Russian Rules. They can be managed more or less independently by Western Companies.

Activities on these stages are heavily affected by the Russian Rules and Norms.
Western Service Companies – Downstream Sector

Emerging segments of work for Western Contractors - combination of Western and Russian execution steps

FEED + DD (former SP)
EPC steps:
Advanced Engineering
E + WD
Ps
(E+WD)PsCm
EPCm
EPC
The cornerstone of any capital project is the preFEED study.
# Overall Project Implementation Plan

**Level 0 Schedule: Overall Project Implementation – From Feasibility Study to Start Up**

<table>
<thead>
<tr>
<th>CASE</th>
<th>FEASIBILITY STUDIES</th>
<th>AWARD FEED</th>
<th>LICENSOR PEPs</th>
<th>FEED CONTRACTOR ACTIVITIES</th>
<th>ESTIMATE (COST)</th>
<th>EPC BIDDER PRE-QUALIFICATION</th>
<th>BID / EVAL / AWARD EPC LSTK CONTRACT</th>
<th>EPC - GRASSROOT REFINERY PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BASE CASE - FEED &amp; EPC</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

**Overall Project Implementation Plan**

- **Base Case:** 71 months total
- **Case 1:** 68 months total
- **Case 2:** 62 months total
- **Case 3:** 56 months total

**Timeline:**

- **From Feasibility Study to Start Up**

**Key Activities:***

- **Feasibility Studies**
- **Award Feed**
- **Licensee PEPS**
- **Feed Contractor Activities**
- **Estimate (COST)**
- **EPC Bidders Pre-Qualification**
- **Bid / Eval / Award EPC LSTK Contract**
- **EPC - Grassroot Refinery Project**
Selected Key Recent Projects in Russia

Salavatnefteorgsyntez

• Project Description:
  FCC Complex

• Years 2004-2005

• Scope:
  – Basic Design Package
  – FEED
  – Studia Proect
  – PMC
  – Beneficial Engineering