Recent Trends in EPC Project Contracting Models

When it comes to project design or construction, chemical industry owners now prefer to make it simpler for themselves by handing over such a huge responsibility to Engineering Procurement and Construction (EPC) players. Swarup Mukherjee, President (Projects), Walchandnagar Industries Ltd, discusses various types of EPC project models implemented in recent times by EPC players and various risk factors associated with them.

The genesis of Engineering Procurement and Construction (EPC) contract as a primary form of project execution was initiated by the project financiers for the risk management considerations for the project. Ever since infrastructure projects funded by the World Bank & Other multilateral agencies gained momentum in India, the concept of Lump Sum Turn Key (LSTK) contract has taken root as the best possible or optimum solution for ensuring achievement of project deliverables without loss of focus and dependencies on external elements like designers/consultants etc., who do not have a financial stake in the project. This model ensured that the entire fund is spent through its single agency that is responsible for the ultimate outcome or project deliverables and is also accountable for any failures/delays.

Initially, there were few contractors (with adequate financial and technological muscle) who could take the overall responsibility of large projects. Slowly, the contractors became financially and technically competent. They gradually expanded their presence across multiple packages and the whole work started being awarded as a single LSTK contract.

EPCM

In some such cases, concept of EPC Management (EPCM) contracts emerged wherein one single company having the knowledge of integration requirement of the entire project, takes the charge for the complete execution and offers separate EPC projects in package basis to different EPC contractors. In such cases, EPCM contractors take the onus of the projects integration and have an overall management control of the project; though directly not responsible for the project cost and schedule, which remains with the project proponent. This method had proven successful in various areas of refinery, metallurgical and petrochemical projects where it calls for high degree of engineering coordination and single vendors with complete capabilities are normally not available.

In any case, the entire issues of land acquisition, Rehabilitation And Resettlement (R&R), Operations And Maintenance (O&M) and sale of the goods after project completion remain with the project proponent. Accordingly, all issues of statutory clearances, handling of all local issues, as well as sensitivities for various fluctuations in the sales proceeds, continue to remain with the project proponent’s management and their effectiveness to ensure proper return on the investments made.

EPC Project Models

Seeing this gap in ensuring proper returns on investment, the concepts of Built, Operate and Transfer (BOT), Built, Own, Operate (BOO) and Built Own, Operate and Transfer (BOOT) projects emerged in early 1990’s. This model became particularly popular in the infrastructure sectors like road, airport, etc. In the BOOT projects, the EPC contractors not only take up and complete the projects but also earn revenue from the project by operating the same for a specified period of time and then handover to the government or other project end owners. One of the most successful models of such type was the construction and operation of...
Mumbai-Pune expressway. Subsequently, other major showpiece airport projects like Delhi airport, Bengaluru airport, Hyderabad airport, etc. were also handled in the same manner.

The returns of such cases are always back-ended but are a boon to the financiers of the project, as the entire risk of returns is covered by the single entity. But the financiers need to have a proper evaluation in such project before committing themselves. Normally, project proponents prefer to go for SPV route or float separate company to control the risks of such large size BOT/BOO/BOOT projects.

EPC contracting (EPC/LSTK project or other infra projects on BOT/BOO/BOOT basis) could not be contemplated in high technology areas like nuclear power plants where competencies were in short supply as well as engineering risks were severe. All the nuclear power projects are practically operating under package wise Procurement And Construction (P&C) contracts with engineering remaining with the project proponent.

This particular sphere of EPC contracts in nuclear power plant is proving a major concern in view of the Nuclear Liability Act to all the contracting companies. This area will see either substantial lack of interest amongst the EPC players in future or may even lead to further amendment of regulatory framework.

While all these models of EPC/LSTK/BOT/BOOT contracting methods had proven to be a boon to the risk management requirements at the project feasibility and funding stage, they have impacted the bottom line of the contracting companies due to the inherent risk element, which cannot be properly quantified at the initial stage.

This matter of risk perception is shown clearly in dismal valuation of the infra companies across market cap levels in the stock market. Though infrastructure remained the key word for the India’s growth story, the price to earnings ratio (PE) enjoyed by these companies hovers at the lowermost rungs in the stock markets. All such EPC project companies, who venture into the high value EPC projects with very back-ended return scenario, remain exposed to high debt burden as well as uncertainties of the overall economic scenario.

Risks in EPC Contract
While EPC contract was primarily mooted for transfer of risk of investment in a project, the contracting companies have assumed the risk (knowingly/unknowingly) in their balance sheets. These risks become further complicated when EPC companies work in foreign countries. More and more infrastructure projects are being taken up in the African continent and in the Gulf countries through EPC route. All these projects, though come with higher perceived margins, they inherently carry the issues of legal risk, country risk, currency risk, war risks, etc. Many of these risks are generally not covered by the EPC contracting companies adequately.

The financiers have a role to play in this risk mitigation process whenever the route of EPC contracting is mooted. The insurance scenario is also evolving rapidly to cover these risks over the years. While loss of profit policy and terrorism risk cover is available at various forms, issues like war risk is traditionally never covered by the insurance agencies. Insurance companies and reinsures are more and more resorting to fine prints in the insurance clause to insulate from the various eventualities for which the insurance is primarily meant.

Conclusion
As more and more project proponents prefer the EPC route, in order to keep their resources limited and focused to their core competence, many construction companies have jumped into the EPC bandwagon to ensure growth. Many such companies do not have full capability or even knowledge of the entire gamut of EPC works.

In many occasions, quite a few companies fail to properly recognise the need of proper risk management at right time, which leads them into a very soft corner. Such difficult occasions and realisations among the EPC contracting companies are likely to lead to consolidation among the EPC players in years to come.

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