

## ■ Prasenjit Chakraborty

**E**PC sector in India is making a steady progress across industries since the last few years. There is a high demand worldwide for new and refurbished infrastructure of all kinds – roads, bridges, mass transit systems, water treatment facilities, power, chemical, petrochemical plants, healthcare facilities – the list is virtually endless. Against the backdrop of increasing focus on India as the manufacturing hub of Asia, the construction activities in different sectors have accelerated. This has fuelled the growth of EPC as a whole.

### Growth propellers

The emphasis on infrastructure development is one of the major growth drivers for the EPC sector. "Infrastructure has to be spruced up at all levels across India to support the burgeoning economy, which is projected to grow consistently at 9 per cent per annum in the 12<sup>th</sup> Plan period (2012-17). To meet the growing demand, the Indian companies – from both public and private sector – are seeking EPC firms having the expertise to deliver complex mega projects, which are being envisaged for oil & gas, power, steel, pipelines, marine, offshore, civil & building sectors in India," points out Ravindran Kayarat, CEO – Hydrocarbon, Essar Projects (India) Ltd (EPL).

A closer look says that it is a win-win situation for both the companies (clients of EPC) and the EPC contractor, since they get to concentrate on their core business strengths. The client needs to build a quality asset at a competitive cost within schedule, while effectively transferring major risk factors. The EPC contractor's role in such a case is to take up single point responsibility to deliver a project utilising the excellent project management skills, dedicated vendor base, and the ability to engineer & visualise the project as per client requirements. "We have delivered projects worth \$ 15 billion across key segments



### Ravindran Kayarat

CEO – Hydrocarbon, Essar Projects (India) Ltd

Hydrocarbon sector with its major expansion plans in refineries, fertilisers, LNG terminals, etc, will provide ample scope for EPC companies in the years to come. The huge growth plans in various industries will have a cascading effect on associated EPC sector for the next three years.

like oil & gas, power, steel, pipelines, marine, offshore, civil & building. EPL brings an unparalleled advantage of providing an owner's perspective to the client as the EPC sector in India gathers momentum," says Kayarat.

As infrastructure segment is making rapid strides, this is bound to fuel the growth of EPC sector. "The government proposed an investment worth ₹ 20,56,150 crore in infrastructure during the 11<sup>th</sup> Plan. During the period 2011-2012, the aim has been to attain sustainable growth of 9 per cent, with emphasis on growth and quality of life. But it is also clear that infrastructure inadequacies will act as a constraint in achieving this growth. To overcome this challenge, the government is also emphasising on the PPP model," says Sanjeev Nakhasi, Corporate Vice President - Operations, Synefra E&C Ltd.

Besides the infrastructure aspect, there are few important leverage points for which companies are roping in EPC contractors. Today, customers' mindsets have changed. They do not want to be responsible for project management on a day-to-day basis and prefer to appoint an EPC contractor, who takes single point responsibility for the entire project. While elaborating on this scenario, Nakhasi explains, "This helps the client to save time for project execution, and system integration has also become easier. There is one contractor who can be contacted for all issues involving the project, and the client needs to maintain only a skeletal staff for project monitoring. This trend has also led to the emergence of SMEs in EPC sector, thus leading to entrepreneurial and employment opportunities."

Despite the growing demand for EPC activities, the question remains as to whether EPC contracting is a complete safe method or not. There are many issues associated with EPC as well. Higher risk exposures and global competition are driving owners & EPC contractors to dwell upon alternative ways to mitigate & control risks. EPC projects today are getting more complex and realisation of larger projects are getting uncertain; at the same time projects are being broken up into phases for cost benefits. Timing of project awards is becoming more unpredictable than ever and it is reflected in delay in the finalisation of contracts by way of lengthy negotiations/budget issues. Service providers are on the frontline of cuts, but opinions differ on the impact.

Taking everything into consideration EPC Lump Sum Turnkey (LSTK) mode of execution appears to be the most preferred method. "The EPC LSTK method of project delivery still remains the preferred choice, since it generates substantial benefit for project owners,

### What India offers for EPC sector

- ❑ Creating infrastructure for all sectors is a priority
- ❑ PCPIR policy aims at promoting huge investments in the chemicals sector in the country and making it a prominent hub for both domestic and international players
- ❑ Oil & gas sector in India is poised for tremendous growth with major expansions planned in refineries (302 MMTPA by 2017)



In EPC projects, estimating the cost and tendering requires efficient skillsets to ensure that we do not run into a financial loss in executing a project. The availability of vast pool of personnel with specialised technical knowledge makes India one of the best manpower providers in the international market.

### Sanjeev Nakhasi

Corporate Vice President - Operations, Synefra E&C Ltd

largely due to transfer of all associated risks to EPC contractor vide assignment of single point responsibility towards quality, price and timely delivery," says Sathiamoorthy G, Managing Director, Tecnimont ICB (TICB) Pvt Ltd.

### Refining & petrochemical projects

In India, the oil & gas sector is a lucrative one for EPC, as it is poised for tremendous growth, with major expansions planned in refineries (302 MMTPA by 2017) as a part of ₹ 2.8 trillion investment for the 12<sup>th</sup> Plan period. The progressive steps like price deregulation in petroleum products should ensure that the oil & gas majors are on track for the expansion of projects. "After introduction of nutrient-based subsidy for fertiliser industry, there is now incentive for the dormant companies to finally carry on with the planned investments. With obvious advantages of the single point responsibility EPC LSTK contracts, the clients trust only those EPC contractors with experience of having effectively delivered complex mega projects," asserts Kayarat.

Huge investments are also being planned to establish/expand LNG terminals by public and private sector

companies for catering to LNG demand by consumers in power and fertiliser sectors. The Petroleum, Chemicals & Petrochemical Investment Region (PCPIR) policy, aimed at promoting huge investments in the chemicals sector in the country and making it a prominent hub for both domestic & international players, is expected to attract investments to the tune of ₹ 2-3 trillion to each notified PCPIR. The PCPIRs approved by the Centre are brownfield Bharuch (Gujarat), Visakhapatnam (AP), Haldia (West Bengal) and greenfield Paradeep (Orissa). The one proposed at Cuddalore in Tamil Nadu is in advanced stages of approvals while the Mangalore (Karnataka) project is under the planning stage.

There are few projects either completed or soon to be completed through EPC method in the country. Take the example of Gujarat's Vadinar Refinery – a 20-MMTPA project, out of which 14 MMTPA has already been completed by Essar Projects (India). IOCL Paradip Refinery (15 MMTPA-LSTK package A-ongoing-within Paradip PCPIR) is also an ongoing project for Essar Projects (India). "We bring an owner's perspective into all projects we deliver. This results in cost-effective solutions, in-house expertise in hydrocarbon sector;

Each EPC company will have to develop its own strategy for optimal profitability and success. Leadership in use of information technology will be most important in winning future EPC LSTK work, and knowledge management systems may become a mandatory EPC offering in the near future.



### Sathiamoorthy G

Managing Director, Tecnimont ICB (TICB) Pvt Ltd

faster mobilisation of equipment and manpower," claims Kayarat.

Similarly, TICB (an integral part of Maire Tecnimont Group) is a 52-year old company and among the few engineering & construction companies in India that have the capability and experience to supply plants to petrochemicals/chemical/oil & gas sectors on EPC LSTK basis. "Our strength can be attributed to strong orientation to technology, engineering and advanced skills in vendor development, project management and control to deliver complex projects," claims Sathiamoorthy.

### The issues

The construction industry has been expanding rapidly over the last few decades. Along with this, the nature of main contracts has also dramatically changed. Contracts are of increasingly complex types – EPC, turnkey, BOOT, PPP, etc. With the opening of different sectors to privatisation and international investment & competition, projects (even in private sector) in areas like roads & bridges, complete townships, SEZs, airports, power plants, industrial plants, etc, are expected to increase manifolds.

To cater to all these sectors, companies should possess high level of skillsets. It is implied that these companies should have an in-house capacity to undertake projects and also deal with eventualities. Project delivery calls for multiple skillsets and involves high risk, owing to the size & complexity of certain projects. "In EPC projects, estimating the cost and tendering requires efficient skillsets to ensure that we do not run into a financial loss in executing a project, and at the same time, stay competitive in winning contracts," points out Nakhasi.

Project management is critical in executing complex projects. The contractor must have the knowledge of using modern programming tools integrated to track progress of all projects to ensure timely completion within budgeted costs. Site management