

## INSIDE THIS ISSUE

### Resurgence of EPC Model

By Dipak Rao & Santosh Pandey

#### Updates

- Roads & Highways
- Renewable Energy
- Power, Oil & Gas
- Airports & Ports
- Project Finance
- Railways



## Resurgence of EPC Model

By Dipak Rao & Santosh Pandey

The last decade of the twentieth Century was one of the most important decades in Independent India's history as it witnessed a number of developments which ultimately changed the façade of modern India, the most important being the liberalization policy. The second half of that decade saw the introduction of a highly ambitious program of development of national and state highways as they are integral to the socio-economic development of the nation. The National Highway Development Program (NHDP) & Golden Quadrilateral programs were conceptualized & launched with the object of developing highways crisscrossing the entire length and width of the nation.

The most favoured mode of execution of road contracts is the Engineering, Procurement and Construction (EPC) mode. Under the EPC contracts, the Government paid the contractor on the basis of measurement of work, which was susceptible to escalation in prices leading to substantial increase in cost of the project. Any change in the design and the cost of input was paid by the government. The current model does not mandate the contractor to maintain the road. The notable drawbacks are the delay in completion and poor quality as the private builder has no long term stake in the projects. Also, the possibility of disputes and claims increase manifold.

The EPC mode was considered to be more expensive and prone to escalation, and bereft of economic incentives. However, the fact of the matter was that the EPC model was not EPC in the true sense of the term, but was basically an item-based construction contract, where the Government retained a major portion of the obligations, including estimates of the work to be done by the contractor.

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There were a number of issues and areas which were susceptible to create problems thereby turning the model into a rather unattractive option. The first issue was handing over of encumbrance free site on time. The earlier EPC model was bereft of provision relating to handing over a definite part of site on or before achieving the financial close. The delay in handing over the site resulted in claims of extension of time, escalation and idling of manpower & resources which ran into millions of rupees.

The second issue was change in scope of work under which there was invariably a dispute as to the rate at which the work was to be executed. The third issue was price variation and escalation which was a direct result of delay in handing over of site on time. The computation of such claims was also an issue giving rise to another claim.

Another issue in the EPC model which makes it somewhat impractical and unviable is the period for which the contractor has to be responsible for defect liability. In the existing model, the defect liability of the contractor is only for a period of 12 months from the Commercial Operations Date (COD), meaning thereby that the contractor is not liable for any fault appearing in the construction after the defect liability period was over. In practice, the defects start surfacing only after the first year or after the following monsoon season. As such, the contractor could escape its liability for constructing poor quality road and the authority did not have any remedy or option available. If the defect liability period is increased to 2-3 years after COD, the contractor would be obliged to maintain quality in construction to avoid any liability for poor construction surfacing after COD. This would ensure good quality in construction. Apart from the above issues, other variety of issues emanated from the item rate based contracts which in totality made the model unviable.

All these factors led to a gradual shift in Government's policy from EPC to Build, Operate & Transfer (BOT) model. The situation as of now is that a mere 5% of the total Highway projects of 600 km proposed to be awarded in the current fiscal year is to be bid under the EPC mode.

The concept of BOT Annuity and Toll models were introduced in the second half of the last decade of twentieth Century. The Annuity & Toll models subsequently became so preferred and popular that the EPC mode was practically discontinued in the highway sector.

However, recourse to large scale annuity funding has raised fiscal concerns as the Annuity payments are likely to increase at a rapid pace in the coming years and become a major drag on the finances of the Government. In fact, the Government's liability of annuity payments is around a whopping Rs. 84,000 crore in 2010-11. In the current scenario, the Government is finding it increasingly difficult to meet its annuity obligations and cannot sustain the increasing expenses for long. It is therefore exploring the possibility of executing the projects on EPC model but at the same time is also aware of the shortcomings of the earlier model.

What is required at this stage is the need to look into the areas and issues in the EPC model which gave rise to disputes or were instrumental in making the earlier model an unviable option and find suitable solutions for the same.

The Planning Commission, Government of India is preparing the new model concession agreement for EPC projects. The proposed new EPC model aims at somewhat curing and correcting the deficiencies & shortcomings of the earlier model. The new model seeks to transform the way EPC projects are executed from an item rate contract to turnkey basis. In an item-rate contract, every item of expenditure is separately tendered and billed for, while, under turnkey, the government specifies the broad requirements for a highway including the estimated cost. The contractor then has complete freedom to design, engineer and execute the project.

Under the new model, the contractor would accept the risk & responsibilities for both the design and the construction of the work. The Government will only provide a feasibility report and the private companies will provide design based on the feasibility report and the Government will select bidders on the basis of the design and costs quoted. The EPC which is contemplated now will be a single point responsibility contract in which the Government will just give a broad outline of requirements and quality standards. The EPC contractor takes the responsibility of completing the project at a given cost and time frame and acts as a single point of interface between the promoter and all other agencies connected with the project. This will also cut out a layer of intermediaries as the companies that bag the projects anyway give them out on true contract to smaller developers.

The proposed model documents for EPC contracts should address the above issues to make the new model more practical and viable. The Government has decided to rehabilitate the existing two-lane stretches throughout India. Therefore, the Government cannot stretch its limited resources and the only option left is to revive the true form of EPC contracts so that the past mistakes are not repeated and the viability and sustainability of a project can be maintained.



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## Asian Development Bank announces US\$200 million loan to build roads in Northeast

Multilateral funding agency Asian Development Bank on Friday announced a US\$200 million loan to reconstruct roads in north-eastern region of the country to open up growth and development opportunities. The funds, to be released in two tranches under the North Eastern State Roads Investment Programme, will upgrade over 400 km of roads in the north-eastern states of Assam, Manipur, Meghalaya, Mizoram, Sikkim and Tripura. The improvement work will include widening existing roads, strengthening pavements, raising embankments, and providing permanent structures at river crossings, ADB said in a statement.

[SOURCE](#)

## Road Ministry plans to invest US\$ 5,867 bn on highways

Amid concerns raised by Prime Minister Manmohan Singh on highways deficit in the country, the government is looking at an investment of over US\$ 5,867 bn in the road sector in the next five years, over 65% of which will come from the private sector. "The pace of infrastructure development needs acceleration if the gaps are to be bridged. We are looking at an investment of US\$ 5,867 bn in the highways sector in the 12th Five-Year Plan (2012-17)," Road Transport and Highways Minister C P Joshi

said. Joshi said that National Highways Authority of India (NHAI) will shell out Rs 87,000 crore while the remaining Rs 1.77 lakh crore is envisaged from the private players.

[SOURCE](#)

## Govt approves two highway projects worth US\$ 518 mn

The government today gave its approval to two highway projects worth over US\$ 518 mn covering Chhattisgarh, Orissa and Kerala, with a view to expediting the infrastructure work in these states. This includes the project for development of four laning of 150 km long Chhattisgarh-Orissa Border - Aurang section on National Highway-6 in Chhattisgarh under NHDP. The total project cost is estimated at US\$ 344 mn and covers the Districts of Raipur and Mahasamund in Chhattisgarh, an official statement issued after the meeting of Cabinet Committee on Infrastructure, said.

[SOURCE](#)



## Govt mulls no transmission charge for solar projects

The government is considering exempting developers of solar mission projects from bearing electricity transmission charges and technical losses. If implemented, the policy will give a leg-up to solar power, which remains disadvantaged due to high costs of generation. The government plans to provide this exemption to 1,000 mw capacity addition envisaged in the first phase of the Jawharlal Nehru National Solar Mission (JNNSM), which is expected to be completed by 2013. These benefits will be applicable to the solar power plants for their entire 25 year life, a senior government official said.

[SOURCE](#)

## Solar parks to get high priority: Farooq Abdullah

The government plans to accord high priority to developing large "solar parks", or clusters of units that can generate a total of up to 5,000 megawatts, to help cut costs, Renewable Energy Minister Farooq Abdullah said on Wednesday. Solar parks would be built in the second phase of the National Solar Mission. The mission aims to generate 20,000 mw of power from sunlight in the next decade. Speaking at The Energy and Resources Institute, Abdullah said that solar parks would comprise 25% of the total target capacity under the second phase of the

mission. India plans to add 4,000 mw of grid connected solar power in the second phase between 2013 and 2017.

[SOURCE](#)

## India to Top U.S. Lending With US\$575 Million in Solar Deals

The U.S. Export-Import Bank expects India to become its biggest recipient of funding next year, led by loans for clean-energy projects including US\$575 million of solar deals. The Export-Import Bank's lending plans won't be affected by concern that the renewable energy industry may be vulnerable to a new global recession, said Craig S. O'Connor, director of the bank's office of renewable energy.

[SOURCE](#)



## Madhya Pradesh would be power-surplus state by 2014

Although Madhya Pradesh is facing a shortage of electricity at present, the state will have enough surplus power to sell by 2014, according to an official report. The report states that not only the state would become self-reliant in power generation, but would also be in the position to sell excess power to other states. The state produced 2,990 MW of electricity in 2003, while last year it had produced 6,152 MW of electricity. The state has signed MoUs with 49 private companies including Essar Power and Reliance. If all these MoUs were to fructify, the generation capacity would rise to 67,546 MW, the report said.

[SOURCE](#)

## US\$ 902 mn plan to strengthen power infrastructure in Haryana

With a view to strengthen power transmission and distribution system in the State, the state government has chalked out an ambitious plan of US\$ 902 mn to add 174 new substations and augment the capacity of 98 existing substations. The plan would be completed in three years times in a phased manner so that annual increase in load can be met.

[SOURCE](#)



## Mega plan for Navi Mumbai airport connectivity

The Maharashtra government has prepared a comprehensive project, costing US\$ 19 billion, for efficient connectivity between the proposed Navi Mumbai international airport and Mumbai. The plan includes construction of metro rail and mono rail lines, rail overbridges, extension of existing railway lines and flyovers. Apart from government agencies, Union and state, the government expects the private sector to also be involved in implementation. As much as 44 per cent of the proposed investment is expected to come from the private sector

[SOURCE](#)

## Coastal shipping norms to be eased

The shipping ministry is considering relaxing the coastal shipping rules for container movement in order to promote transshipment activity at the International Container Transshipment Terminal in down-country Kochi. Current cabotage norms allow foreign ships to ply on the coastline of the country only after getting prior licence from the government. While for cargo like bulk, dry bulk and liquid, the shipping ministry wants to make the cabotage law stricter by making licensing process conservative, it is proposing a lenient policy for containers.

[SOURCE](#)

## India: Gangavaram Port Seeks Bids for Capital Dredging Project

Gangavaram port, a private port on the coast of Andhra Pradesh, proposes to undertake shortly capital dredging work, the first such work since the port started operation three years ago, and has accordingly invited bids. The scope of the proposed dredging work involves removal of about 3.5 million cubic metres of silt (including rocks and 2.5 lakh cubic metres of sand trap) over a period of five to six months. The cost estimate is to be finalised depending on the bids. The work order is likely to be issued within next two to three months.

[SOURCE](#)

## India to Seek Funds to Build Ports Costing US\$7.6 Billion to Ease Congestion

India will seek private funds for seven new ports costing 350 billion rupees (\$7.6 billion) as the government tackles transport bottlenecks that are hindering plans to triple exports of agricultural and manufactured goods. About two-thirds of the funds for the new ports will be raised from private sector, Rakesh Srivastava, joint secretary at the Ministry of Shipping, said in a telephone interview in New Delhi. The government has sent the proposal for the harbors to seven Indian states

[SOURCE](#)



## FII to get leeway in infra bond investments

A subdued response from foreign institutional investors (FIIs) vis-a-vis long-term infrastructure bonds has prompted the finance ministry to ease norms for investing in these papers. To lure FIIs, it has reduced the residual maturity limit and the lock-in period for investment in such bonds. Currently, FII investments up to \$25 billion are allowed in long-term infrastructure bonds that have a minimum residual maturity of five years and a lock-in period of at least three years. The scheme will be modified with alterations to both clauses.

[SOURCE](#)

## India Inc raises US\$ 14 billion overseas for infra boost

The government has approved fund raising US\$ 14 billion by companies through external commercial borrowing (ECB) or foreign currency convertible bonds (FCCB) for infrastructure projects in the last two financial years. Companies in the telecom sector raised the most funds at about US\$ 8 billion, which constitutes for 61 per cent of the total money approved, followed by the power sector at US\$ 4 billion in the last two financial years, according to government data.

[SOURCE](#)

## Infrastructure meets 52% of funding target in first 3 yrs of 11th Plan

About 52 per cent of the planned Rs 20 lakh crore investment in infrastructure sector in the 11th Five Year Plan (2007-12) was achieved during the first three years, the government said today. Minister of State for Planning Ashwani Kumar said in a written reply to the Rajya Sabha that investments worth US\$ 457 billion were targeted for infrastructure sector during 2007-12, of which US\$ 237 billion or 51.83 per cent was anticipated as investment during the first three years.

[SOURCE](#)

## Ficci demands body to finance infra sector

Ficci has reiterated its demand to set up an exclusive banking institution on the lines of National Housing Bank (NHB) and Power Finance Corporation (PFC) for catering to financing needs of infrastructure sector, an official said. "Infrastructure is a sector, where loan payback or maturity period is as high as 20 years, while the average commercial bank's loan maturity period is merely three to five years. Therefore, there is a need to set up a banking institution to finance the infrastructure sector specifically," Juneja

[SOURCE](#)



## Railways zeros in on three PPP models

Dedicated Freight Corridor Corporation of India Ltd (DFCCIL), the special purpose vehicle (SPV) formed to construct rail corridors exclusively for freight movement, has shortlisted three models of public-private partnership (PPP) for the 550-km Dankuni-Sonnagar stretch on the eastern corridor. According to DFCCIL managing director R K Gupta, the models are design, build, finance, maintain, operate and transfer; design, build, finance, operate and transfer; and design, build, finance and maintain. Gupta said the railway ministry was yet to approve the options.

[SOURCE](#)

## Two stretches of freight corridor project to start operations by 2012 end

Two stretches of the dedicated freight corridor project are expected to commence operations by the end of 2014, two years ahead of schedule, top officials said. The Rs 77,000-crore dedicated freight corridor project will build new tracks to transport containers and goods at speeds up to 100 km per hour, reducing travel time by a third, and creating one of the world's largest and freight operations built with the latest technology. The sections that are likely to be completed early include 120 km between Mughalsarai in Uttar Pradesh and Sonnagar in Bihar and 140 km between Surat in Gujarat and Vasai Road in Maharashtra.

[SOURCE](#)

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