



**KRS** Infra Ventures Pvt. Ltd.



# **KNOWLEDGE**

**PAPER**

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## Introduction – Indian Infrastructure Status 2020



Indian Infrastructure sector investment estimated approx Rs 100 lakh crore over the next 5 years. It consists of more than 6500 projects across sectors and are classified as per their size and stage of development. Accelerated development of highways will be undertaken including development of 2500 Km access control highways, 9000 Km of economic corridors, 2000 Km of coastal and land port roads and 2000 Km of strategic highways. Delhi-Mumbai Expressway etc., to be completed by 2023. Chennai-Bengaluru Expressway also be started. It is proposed to monetize at least 12 lots of highway bundles of over 6000 Km before 2024. Indian Railways aims to achieve electrification of 27000 Km of tracks. 550 wi-fi facilities at many stations has been commissioned. Four station re-development projects and operation of 150 passenger trains would be done through PPP mode. More Tejas type trains will connect iconic tourist destinations. High speed train between Mumbai to Ahmedabad would be actively pursued. Similarly, more than 100 airports would be developed by 2024 to support Udaan scheme. Air fleet number expected to go up from the present 600 to 1200 during this time. Allocation of Rs 1.70 lakh crore proposed for transport Infrastructure in 2020-21.

Allocation of Rs 22,000 crore proposed for power and renewable energy sector in current year. Expansion of the national gas grid from the present 16,200 km to 27,000 km proposed.

## Southern Expressway Development Project

The Chennai-Bengaluru expressway project is likely to commence in the next three months. The greenfield expressway will be a 262 km, six-lane, access-controlled expressway beginning at Hoskote in Karnataka and ending at Outer Ring Road near Chennai, cutting down the travel time between the two metropolises to around four hours from six to seven hours currently. It will pass through Hoskote, Malur (Karnataka), V Kota, Palamaner (Andhra Pradesh), Gudiyatam, Arakkonam and Sri Perambalur (Tamil Nadu). Originating at Hoskote, the Bengaluru-Chennai expressway will cover a length of 75.64 km within Karnataka, 88.30 km in Andhra Pradesh and 98.32 km in Tamil Nadu passing through Tiruvallur, Kancheepuram and Vellore districts in Tamil Nadu before ending at Sriperambudur. The expressway project will be executed in five phases: Bengaluru to Kolar; Kolar to Palamaner; Palamaner to Chittoor; Chittoor to Kancheepuram and Kancheepuram to Sriperum-



budur. The expressway will also cut down the distance between the two cities by around 80 km. ■

# KNOWLEDGE PAPER

## Gaganyaan-First Manned Space Mission



The Human Space Mission: Gaganyaan (US\$ 1.4 Billion Project) is targeted for December 2021. The design and configuration of major subsystem are finalized. The procurement and system/ subsystem realization for tests and flight has commenced.

The selection of Astronaut and training process for Gaganyaan mission is progressing well including the training in Russia. This Project has three Astronauts among which one will be Women. MoUs in this regard have already been signed with DRDO labs, Indian Air Force and Russian space agency.

Launcher decided (GSLV Mk III) by ISRO for this mission has requisite payload carrying capacity for Orbital module in desired elliptical orbit. Process for human rating of GSLV Mk-III is progressing well.

## Artificial Intelligence Role In Indian Infrastructure

Indian Infrastructure offers huge scope for Artificial Intelligence that has been a growing hub for business

and ranks among the most lucrative investment destinations for technology transactions worldwide. In recent times, the country has focused its interest more on technology, realizing that it is a vital component of economic development. From enterprises, agriculture, and education to healthcare and transportation, Artificial Intelligence can be a transformative technology for the country.

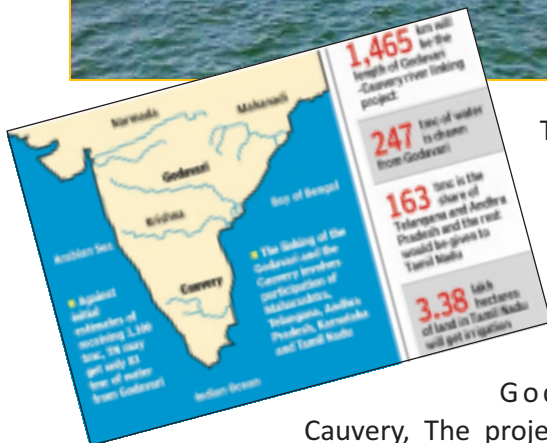
Government of India has embarked on an ambitious initiative to set up Smart Cities across India, aimed at driving economic growth and improving the quality of life, by harnessing IT solutions. As part of the Smart Cities Mission, 99 cities have been selected with expected investment of INR2.04 lakh crores. The strategic components of these Smart Cities include city improvement (retrofitting), city renewal (redevelopment) and Greenfield development in addition to a pan-city initiative in which Artificial Intelligence application applied covering large parts of the city.

GOI proposed a plan to develop an institutional framework and proposed funding of Rs 7,500 crores, initially over a three-year period, for the creation of a cloud computing platform called AIRAWAT and



research institutes and set up a high-level task force to oversee the rollout and implementation of Artificial Intelligence. ■

## Government of India Plan of Rs 60,000 crore river linking project



The Union Government Planned Rs 60,000 crore projects to link rivers Godavari and

Cauvery, The project, for which

the plan has been prepared, will save about 1,200 tmc ft of Godavari water that drains into the sea and dramatically satisfy the irrigation needs of farmers in Tamil Nadu.

"The plan for the project is ready and the government is looking for a loan of Rs 60,000 crore to execute the project," The project envisages linking rivers Godavari-Krishna- Pennar-Cauvery.

The government would raise finances for the project either from the World Bank or the Asian Development Bank.

## Northeast India Airports-Projects and Operations

Assam has most number of operational airports in the region namely-Guwahati, Dibrugarh, Silchar,

Tezpur, Jorhat and Lilabari and they together agreed for development of more airports which could meet the expectations of the local people as well as the tourist coming here. Issues related to land, new Greenfield airport projects and connectivity to remote locations were also planned by Government of India.

AAI stated Lokpriya Gopinath Bordoloi International Airport, Guwahati is considered the gateway to the north eastern states and a major hub for export of local products and the tourism. The meeting focused on enhancing more cargo facilities for the benefit of farmers and scope for agri-business in the state as well as the adjoining areas. The passenger movement at the LGBI Airport has already crossed 6 million marks in 2019. Considering the need of hour, AAI is constructing a world class new integrated passenger terminal building at Guwahati which will be equipped with all major facilities. And the new airport building is expected to be operational by 2021.

India is poised to become the third largest aviation market in the world in coming years and most of the airports in the world are expanding their existing structure to cater the need of future, similarly NER airports are also growing in terms of passenger movement and developing aviation infrastructure is



need of the hour. Recently, to fulfill the aspirations of the people of Arunachal Pradesh, new Greenfield airport at Holongi (Itanagar) will be constructed soon and work for it have been awarded. ■

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### Solar Sector gets largest investment of Rs 4,000cr in Rajasthan



In Rajasthan, first largest investment planned by Central Public Sector Unit NTPC and Rajasthan Solarpark Development Corporation Ltd (RSDCL), a subsidiary of RRECL, to develop 925 megawatt capacity solar power projects in Nokh Solar Park, near Jaisalmer.

NTPC will develop solar PV projects in the park at an estimated investment of Rs 4,000 crore, while RSDCL will build the basic infrastructure that would require about Rs 450 crore. The park will be connected to PGCIL 765 kV Bhadla-II sub-station.



NTPC and RSDCL officials will bring to Rajasthan the biggest investment in state's solar power sector. The NTPC board has already approved the investment.

The park is proposed to have four projects, three of 245 MW each to be developed in EPC mode and one of 190 MW in developer mode. For power evacuation system, RSDCL will construct four park pooling substations and transmission lines for Nokh solar park. Availability of most sunny days in a year, high insolation and large tracts of government as well as private non-cultivable barren land make Rajasthan a sought-after destination for solar developers. To harness the potential, the state government has recently launched new Rajasthan Solar Energy Policy, 2019 and Rajasthan Wind and Hybrid Energy Policy, 2019, giving competitive incentives to investors. Government is also promoting establishment of ultra mega renewable energy power parks with CPSUs and private developers.

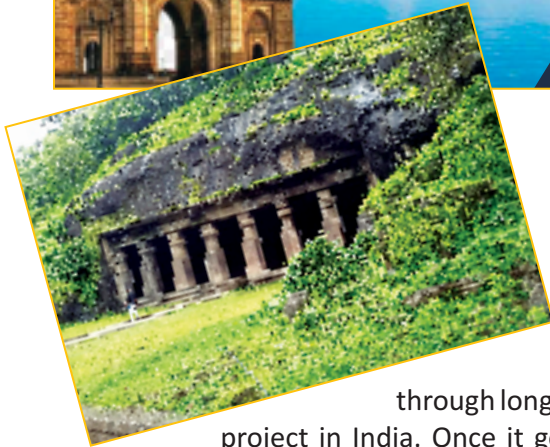
### Gujrat to Gorakhpur Gas Pipeline Project

Govt. owned Indian Oil Corporation plan to lay nation longest LPG pipeline from Gujrat coast to Gorakhpur in state of Uttar Pradesh to cater growing cooking gas demand.



This 1,987 Kilometer pipeline will carry 3.75 million tons per annum of LPG will route through City of Ahmadabad, Ujjain, Bhopal, Kanpur, Allahabad, Varanasi and Lucknow. The Project is under approval. ■

## India's longest ropeway project over sea in Mumbai



State of Mumbai Planned connectivity of Elephanta Caves ,

through longest ropeway project in India. Once it gets the final approval, construction work on the project, worth Rs 700 crore is scheduled to start by the end of this year. The project will take nearly 42 months to complete. Tourism will get a major boost with 14-minute, 8-km ride by the 30-seater cable cars. The project also involves the installation of 8-11 towers mid-sea, each 50 metres to 150 metres tall. Currently, it takes nearly an hour for the 10-km cruise from Mumbai and vice versa. the tentative fare is expected to be around Rs 500 for Indians and Rs 1,000 for foreign tourists. The ropeway will also offer tourists/visitors a view of mudflats on the east coast as well as the mangroves. The Operation of this Tourism Infrastructure will starts from October 2022. Around 10 Lakhs Visitors to the island every year.

## Indian Government approves mega container port plan at Vadhavan

India's largest container port, Jawaharlal Nehru Port Trust (JNPT), is all set to get a far more powerful deep-draught neighbor that is capable of handling 20 million teu per annum. The proposed Vadhavan port would straightaway catapult it into the list of the world's top ten container ports.

The long-pending plan envisages the construction of a deep-draught port with alongside depth of 20 m that can accommodate the largest container ships in the world. This new port could also cater to JNPT's spillover traffic.

The upcoming Vadhavan port will be constructed at Dahanu in Palghar district near the Gujarat border, about 160 km northwest of Mumbai, at a cost of INR655.45 billion (USD9.2 billion). The twist in the tale is that Vadhavan would not really be a competitor to JNPT, because the latter would have 51% ownership in the special purpose vehicle (SPV) being created for the execution of the project.



Vadhavan has a natural draught of about 20 m close to the shore, making it an ideal port for handling modern, mega container vessels in the 15,000 – 25,000 TEU range. ■

# KNOWLEDGE PAPER

## Investments in Infrastructure Sector in INDIA



India is expected to become the third largest construction market globally by 2022. India plans to spend US\$ 1.4 trillion on infrastructure in the next five years to have sustainable development in the country.

### Government Initiatives

The Government of India is expected to invest highly in the infrastructure sector, mainly highways, renewable energy and urban transport. The Government of India is taking every possible initiative to boost the infrastructure sector. Recent Government Announcements:

- › India plans to spend US\$ 1.4 trillion on infrastructure in the next five years.
- › NHA will be able to generate revenue of Rs one lakh crore (US\$ 14.31 billion) from toll and wayside amenities over the next five years.
- › Government of India has given a massive push to the infrastructure sector by allocating Rs 4.56 lakh crore (US\$ 63.20 billion) for the sector.
- › Communication sector allocated Rs 38,637.46 crore (US\$ 5.36 billion) to development of post and telecommunications departments.
- › The Indian Railways received allocation under Union Budget at Rs 66.77 billion (US\$ 9.25 billion). Out of this allocation, Rs 64.587 billion (US\$ 8.95 billion) is capital expenditure.

- › Rs 83,015.97 crore (US\$ 11.51 billion) allocated towards road transport and highway.
- › Rs 3,899.9 crore (US\$ 540.53 billion) to increase capacity of Green Energy Corridor Project along with wind and solar power projects.
- › Allocation of Rs 8,350.00 crore (US\$ 1.16 billion) to boost telecom infrastructure.
- › Water supply to be provided to all households in 500 cities.
- › Allocation of Rs 888.00 crore (US\$ 110.88 million) for the upgradation of state government medical colleges (PG seats) at the district hospitals and Rs 1,361.00 crore (US\$ 188.63 million) for government medical colleges (UG seats) and government health institutions.

### Achievements

Following are the achievements of the government in the past four years:

- › Metro rail network has touched 657 Km.
- › The largest PE investment witnessed was the Canadian asset management firm Brookfield's US\$ 1.9 billion acquisition of Pipeline Infrastructure India in first quarter of 2019.
- › The total national highways length increased to 122,434 kms in FY19 from 92,851 kms in FY15.
- › India's rank jumped to 24 in 2019 from 137 in 2015 on World Bank's Ease of doing business - "Getting Electricity" ranking.
- › Energy deficit reduced to 0.7 per cent in FY18 from 4.2 per cent in FY14.
- › Number of airports has increased to 102 in 2019.

### Road Ahead

India's national highway network is expected to cover 50,000 kilometers by 2020. National highway construction in India has increased by 20 per cent year-on-year. The government has suggested the investment of Rs 5,00,000 crore (US\$ 750 billion) for railways infrastructure between 2019-2030. ■



## KRS MARKETING Partnership Proposal

### Marketing Requirements

Handling business opportunities in India require various steps and Marketing Partnership will help you to understand the practice and management to work in India. Considering the promotion before official participation in business, few steps like promotion, introducing own product range to manage the requirement development accept our standard products or services, advance preparation of participation in Indian Opportunities, management of local vendor team, if required for joint participation, handling tenders, offers, negotiations, contract management support etc., the list is ongoing and KRS Infra Ventures Pvt. Limited ensure that our experience being in this trade from last three decades offer you wider experience base in INDIA.

### Marketing Proposal

The KRS Group herewith introduce KRS Infra Ventures Pvt. Limited herewith offers the marketing partnership to your organization to promote you and yours associates interest in Indian Infrastructure Sector with following ways:

- ▶ Informing Business Opportunities in India for business scope of your organization.
- ▶ Promoting your organization with introducing and presenting details to various clients in Government and

Private Sector and follow-up for acquisition formalities (tendering process, finalization of business, all assistance during implementation & after sales etc.)

- ▶ Informing the current scenario of market in view of Government Policies, Procurements plans etc.
- ▶ Advising the strategies required during promotion for successful business opportunities.

The partnership terms will require discussions to finalize, which will be second step after receiving your principal approval and suggest you to work on following options for understanding:

- ▶ **Marketing Partnership Joint Venture**-which means “KRS Infra Ventures” will offer all Marketing support in India and your organization handle the technical & commercial need of the projects targeted and rest terms conditions of arrangement will decided after in principal approval of partnership.
- ▶ **Exclusive Agent in INDIA**-KRS will be offered exclusive Agency Agreement for 3 years minimum to develop and managing business opportunities for your organization and terms & conditions of this agreement will be discuss after principal approval of working.



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