



# INDIA'S INFRASTRUCTURE

NEWSLETTER 2019-20



## OVERVIEW

**I**nfrastructure sector is a key driver for the Indian economy.

The sector is highly responsible for propelling India's overall development and enjoys intense focus from Government for initiating policies that would ensure time-bound creation of world class infrastructure in the country. Infrastructure sector includes power, bridges, dams, roads and urban infrastructure development. In 2018, India ranked 44th out of 167 countries in World Bank's Logistics Performance Index (LPI) 2018.

India has a requirement of investment worth Rs 50 trillion (US\$ 777.73 billion) in infrastructure by 2022 to have sustainable development in the country.

The 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.

India and Japan have joined hands for infrastructure development in India's north-eastern states and are also setting up an India-

Japan Coordination Forum for Development of North East to undertake strategic infrastructure projects in the northeast.

Indian Railways will require investment of Rs 35.3 trillion (US\$ 545.26 billion) by 2032 for capacity addition and modernization. The capital expenditure in the sector is expected to be increased 92 per cent annually.

As of September 2018, Rs 1.90 trillion (US\$ 27.07 billion) has been sanctioned for construction of about 12,000 km of road in the northeast region in India.

The Airports Authority of India aims to bring around 250 airports under operation across the country by 2020. The AAI plans to spend over Rs. 21,000 crore (US\$ 3.2 billion) between 2018-22 to build new terminal and expand capacity of existing ones.

The government is planning to invest US\$ 2.86 billion in the upstream oil and gas production to double the natural gas production to 60 bcm and drill more than 120 exploration wells by 2022.

## Introduction

India has the one of largest road network across the world, spanning over a total of 5.5 million km. This road network transports 64.5 per cent of all goods in the country and 90 per cent of India's total passenger traffic uses road network to commute. Road transportation has gradually increased over the years with the improvement in connectivity between cities, towns and villages in the country.

As per Union Budget 2019-20, the Government of India provided an outlay of Rs 1.12 trillion (US\$ 15.48 billion) under the Ministry of Road Transport and Highways.

The construction of highways reached 9,829 km during FY18 which was constructed at an average of 26.93 km per day. The Government of India has set a target for construction of 10,000 km national highway in FY19. During April-June 2018 a total of length of 2,345 km of national highways was constructed.

The private sector has emerged as a key player in the development of road infrastructure in India. Increased industrial activities, along with increasing number of two and four wheelers have supported the growth in the road transport infrastructure projects. The government's policy to increase private sector participation has proved to be a boon for the infrastructure industry with a large number of private players entering the business through the public-private partnership (PPP) model.

With the Government permitting 100 per cent foreign direct investment (FDI) in the road sector, several foreign companies have formed partnerships with Indian players to capitalize on the sector's growth. MAIF 2 became the first largest foreign investment in Indian roads sector under TOT mode worth Rs 9,681.5 crore (US\$ 1.50 billion). In May 2018, the Government of India signed US\$ 500 million loan agreement with World Bank to provide additional funding for construction of 7,000 km climate resilient roads out of which 3,500 km will be built using green technologies under Pradhan Mantri Gram Sadak Yojna (PMGDY). As of October 2018, total length of projects awarded was 6,400 kms under Bharatmala Pariyojana (including residual NHDP works). The total amount of investments are estimated to reach Rs 1.58 trillion (US\$ 2.25 billion) in FY19.

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## Current Development

Government of India has approved highway projects worth Rs 2

billion (US\$ 29.83 million) to improve connectivity among Gujarat, Maharashtra, Rajasthan, Madhya Pradesh and Diu.

The Ministry of Road Transport and Highways has fixed an overall target to award 15,000 km projects and construction of 10,000 km national highways in FY19. A total of about 295 major projects including bridges and roads are expected to be completed during the same period.

The Government of India signed US\$ 500 million loan agreement with World Bank to provide additional funding for construction of 7,000 km climate resilient roads out of which 3,500 km will be built using green technologies under Pradhan Mantri Gram Sadak Yojna.

The Prime Minister's Gram Sadak Yojana (PMGSY) is a scheme for development of rural roads in India. The Government of India has succeeded in providing road connectivity to 85 per cent of the 178,184 eligible rural habitations and all villages are expected to be connected through a road network by 2019. Total length of roads constructed were 47,447 km in 2017-18.

An umbrella program for the highway sector to improve National Corridor Efficiency of 34,800 kms to be implemented over a period of 2017-18 to 2021-22 at a cost of USD 82 billion.

Additionally, to fast track process, 10% of funds will be ear-marked under the Grand Challenge

Mechanism for the State Government. It is also proposed that 1911 kms of International Connectivity Roads and 3319 kms. of Border Roads will be developed under the project. And, first phase would entail development of 2000 kms of International Connectivity and Border Roads at an estimated cost of USD 3.84 billion.<sup>65</sup>

## Future Plans

The Government of India aims to construct 65,000 km of national highways at the cost of Rs 5.35 lakh crore (US\$ 741.51 billion) by 2022.

National Highway Development Project (NHDP) is a 7 phase project amounting to US\$ 60 billion. The project aims to widening, upgradation and rehabilitation of 47,054 kilometres of national highways.

During 2017-18 to 2021-22, 83,677 kms of highway sector projects are proposed to be implemented with an overall cost of USD 106 billion. This includes:

Bharatmala Pariyojana Projects-34,800 km of National Highways (NHs) at an approved outlay of USD 82 billion.

48,877 kms of projects under other ongoing schemes like NH(O), Special Accelerated Road Development Programme in North East (SARDP-NE), Externally Aided Projects (EAP) and Roads Projects in left Wing Extremism Affected Areas (LWE) at an estimated cost of USD 24 billion.

The Government of India aims to complete 200,000 km national highways by 2022. ■





## Introduction

The Indian Railways is among the world's largest rail networks. The Indian Railways route length network is spread over 115,000 km, with 12,617 passenger trains and 7,421 freight trains each day from 7,349 stations plying 23 million travellers and 3 million tonnes (MT) of freight daily. India's railway network is recognised as one of the largest railway systems in the world under single management.

India was among the top 20 exporters of railways globally, as of 2017. India's exports of railways have grown at a CAGR of 27.05 per cent during 2010-2017 to US\$ 303.29 million. Exports of railways in 2018 stood at US\$ 454.99 million.

The Government of India is going to come up with a 'National Rail Plan' which will enable the country to integrate its rail network with other modes of transport and develop a multi-modal transportation network.

There is a rapid increase in demand for urban mass transportation systems in the country. Several metro rail projects are in progress to improve connectivity within cities.

## Current Development

In collaboration with the Government of Japan, a high speed passenger corridor project between Ahmedabad to Mumbai was undertaken in Railway Budget 2016-17. Construction work has already begun and the total cost of the project is estimated at US\$ 14.52 billion. The project is estimated to be operational by 2022.

Indian Railways is targeting to increase its freight traffic to 3.3 billion tonnes by 2030 from 1.1 billion tonnes in 2017.

The Cabinet Committee on Economic Affairs (CCEA) has approved nine projects worth Rs 24,374.86 crore (US\$ 3.63 billion) for expansion of railway network and connectivity in Assam, Jharkhand, Chattisgarh and Maharashtra, Uttar Pradesh and Madhya Pradesh, Madhya Pradesh and Maharashtra, Telangana and Maharashtra, Andhra Pradesh, Odisha and Chattisgarh which is expected to ease traffic bottlenecks and help the upcoming industries in the region and additional

transport capacity to meet their requirements.

India to build its first railway station inside tunnel at a height of 3,000 meters and length of 27 km on Bilaspur-Manali-Leh line in Himachal.

India Railways as undertaken modernisation of railway stations under the Adarsh station scheme. Out of the total 1,253 railway stations identified under the scheme, over 1,050 railway stations have already been modernised.

## Future Plan

Indian Railways plans to build 7 high-speed rail corridors to provide faster rail connectivity across the country, for high speed train project, at a cost of US\$ 17 billion.

Indian Railways has planned completion of electrification in next 4-5 years, which will lead to energy savings worth Rs 10,000 crore (US\$ 1.55 billion).

The Government of India plans to invest around Rs 330,000 crore (US\$ 49.21 billion) for setting up three new arms of the Dedicated Railway Freight Corridors (DFC), crisscrossing the length and breadth of the country, in the next eight years.

The Ministry of Railways is planning to build a 240 km broad gauge railway line to connect Port Blair & Diglipur, in Northern Andaman island at an estimated cost of US\$ 359.01 million. This proposed line will immensely improve the tourism sector on the island.

Indian Railway is planning to spend 10 billion – 15 billion annually for track maintaining. Indian Railways has planned to introduce self-propelled ultrasonic rail testing cars, digital ultrasonic flaw detection machines, improvement in welding system for track maintaining, broken rail detection system and video monitoring of rail components to maintain railway tracks.

Indian Railways will require investment of Rs 35.3 trillion (US\$ 545.26 billion) by 2032 for capacity addition and modernisation. The capital expenditure in the sector is expected to be increased 92 per cent annually. ■



## Introduction

India is the third largest producer and third largest consumer of electricity in the world, with the installed power capacity reaching 350.16 GW as of February 2019. The country also has the fifth largest installed capacity in the world.

Power is one of the most critical components of infrastructure crucial for the economic growth and welfare of nations. The existence and development of adequate infrastructure is essential for sustained growth of the Indian economy.

In FY19, total thermal installed capacity in the country stood at 222.93 GW, while renewable, hydro and nuclear energy installed capacity totalled to 75.06 GW, 45.40 GW and 6.78 GW, respectively.

India's power sector is forecasted to attract investments worth Rs 9-9.5 trillion (US\$ 128.24-135.37 billion) between FY19-23.

India could become the world's first country to use LEDs for all lighting needs by 2019, thereby saving Rs 40,000 crore (US\$ 6.23 billion) on an annual basis.

India is on path to achieve 100 per cent household electrification by March 31, 2019, as envisaged under the Saubhagya scheme.

## Current Development

Wind energy is the largest renewable energy source in India, projects like the Jawaharlal Nehru National Solar Mission (aims to generate 20,000 MW of solar power by 2022) are creating a positive environment among investors keen to exploit India's potential. There are plans to set up four solar power plants of 1GW each. As of November 2018, India has 72.01 GW of renewable energy capacity. The target is to achieve installed capacity of 175 GW by FY22.

With a large swathe of rivers and water bodies, India has enormous potential for hydropower. As of November 2018, India has 45.40 GW of hydro power generating capacity. By 2022, it is expected to witness total installed capacity addition of 6.82 GW.

India has large reserves of coal. By the end of November 2018, total installed coal thermal power capacity in India stood at 190.29 GW. By 2022, it is expected to witness total installed capacity addition of 47.86 GW.

The country has net installed capacity of 6.78 GW as of February 2019, using nuclear fuels, across 20 reactors. Of the 20 reactors, 18 are Pressurised Heavy Water Reactors (PHWR) and 2 are Boiling Water Reactors (BWR).

## Future Plans

The Government of India has released its roadmap to achieve 175 GW capacity in renewable energy by 2022, which includes 100 GW of solar power and 60 GW of wind power. The Union Government of India is preparing a 'rent a roof' policy for supporting its target of generating 40 gigawatts (GW) of power through solar rooftop projects by 2022.

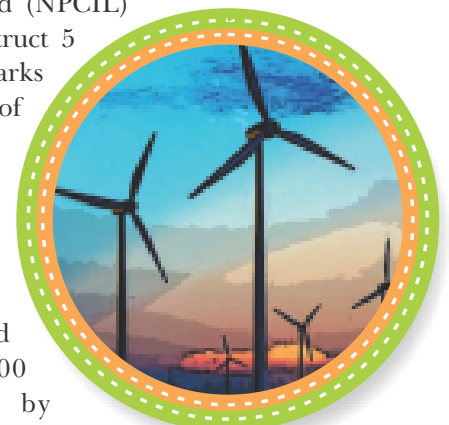
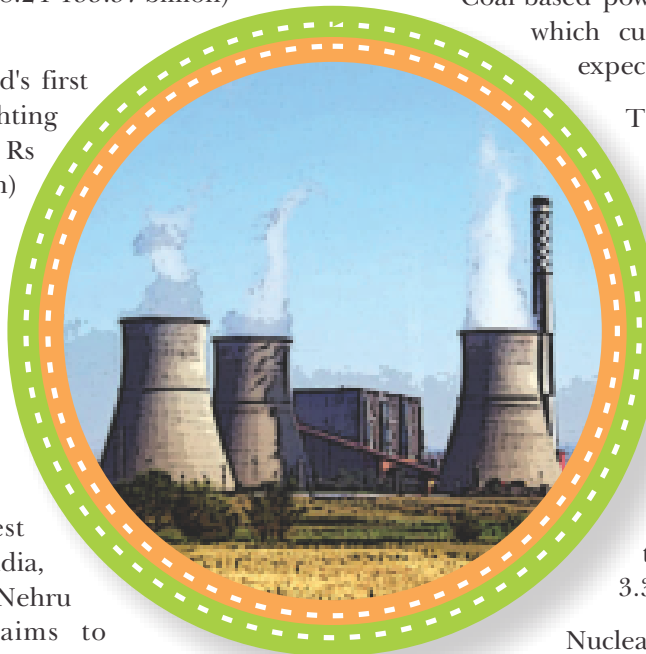
Coal-based power generation capacity in India, which currently stands at 191.09GW is expected to reach 330-441 GW by 2040.

The Government of India is expected to offer nearly 20 power transmission projects worth Rs 16,000 crore (US\$ 2.22 billion) for bidding in 2019

As of February 2019, India has 6.78 GW of installed nuclear capacity; with one of the world's largest reserves of thorium, India has a huge potential in nuclear energy. By 2022, it is expected to witness total installed capacity addition of 3.30 GW.

Nuclear Power Corporation of India Limited (NPCIL) plans to construct 5 nuclear energy parks with a capacity of 10,000 MW.

The Government of India will set up 21 new nuclear power reactors with a total installed capacity of 15,700 megawatt (MW) by 2031. ■





## Introduction

India has 12 major ports and about 200 non-major ports. Under the National Perspective Plan for Sagarmala, six new mega ports will be developed in the country. During FY18, cargo traffic at major ports in the country was reported at 679.36 million tonnes (MT), showing a growth of 4.77 per cent over the same period last year. In FY19 (up to November 2018) traffic has increased 4.83 per cent year-on-year to 461.22 million tonnes. Cargo traffic at non-major ports was estimated at 491.95 million tonnes FY18.

During FY18, cargo traffic at major ports in the country was reported at 679.36 million tonnes (MT). In FY19P (up to February 2019) traffic increased by 2.79 per cent year-on-year to reach 633.87 million tonnes. Cargo traffic at non-major ports was estimated at 491.95 million tonnes FY18 and grew at 9.2 per cent CAGR between FY07-18.

The major ports had a capacity of 1,452 million tonnes by FY18 end. The Maritime Agenda 2010-20 has a 2020 target of 3,130 MT of port capacity.

## Current Development

The government has initiated NMDP, an initiative to develop the maritime sector; the planned outlay is US\$ 11.8 billion.

Ports sector in India has received a cumulative FDI of US\$ 1.64 billion between April 2000 and June 2018. Total investment in Indian ports by 2020 is expected to reach US\$ 43.03 billion.

SEZs are being developed in close proximity to several ports, thereby providing strategic advantage to industries within these zones. Plants being set up include

1. Coal-based power plants to take advantage of imported coal.
2. Steel plants and



edible oil refineries. Development of SEZs in Mundra, Krishnapatnam, Rewas and few others is underway.

Government of India is targeting to make the country the first in the world to operate all 12 major domestic government ports on renewable energy. The government plans to install almost 200 MW wind and solar power generation capacity by 2019 at the ports. The energy capacity could be ramped up to 500 MW in future years.

39 Public Private Partnership (PPP) projects are operational at a cost of around US\$ 2219.4 million and capacity of 240.72 Million Tonnes Per Annum (MTPA). 32 PPP projects at an estimated cost of around US\$ 3917.6 Million and capacity 264.77 Million Tonnes Per Annum (MTPA) awarded and are under implementation.

## Future Plans

Govt. of India plans to create port capacity of around 3,200 MMT to handle the expected traffic of about 2,500 MMT by 2020.

To develop two major ports (one each on East and West coast) to promote trade as well as two hub ports (one each on the West coast and the East coast) – Mumbai (JNPT), Kochi, Chennai and Visakhapatnam.

Master plans for 142 capacity expansion projects worth Rs 91,434 crore (US\$ 14.19 billion) have been prepared by the Government of India under the Sagarmala programme.

Dry docks are necessary to provide ship repair facilities. Out of all major ports, Kolkata has 5 dry docks, Mumbai and Visakhapatnam have 2; the rest have 1 or no dock at all. Potential market size of ship repair in India is around Rs 2,500-3,000 crore (US\$ 388-466 million) of which around Rs 1,000-1,500 crore (US\$ 155-233 million) has been tapped as of 2017.

Under the Sagarmala Programme, the government has envisioned a total of 189 projects for modernisation of ports involving an investment of Rs 1.42 trillion (US\$ 22 billion) by the year 2035. ■



## Introduction

The civil aviation industry in India has emerged as one of the fastest growing industries in the country during the last three years. India is currently considered the third largest domestic civil aviation market in the world. India has become the third largest domestic aviation market in the world and is expected to overtake UK to become the third largest air passenger market by 2024.

India's passenger traffic grew at 16.52 per cent year on year to reach 308.75 million in FY18. It grew at a CAGR of 12.72 per cent during FY06-FY18.

Domestic passenger traffic grew YoY by 18.28 per cent to reach 243 million in FY18 and is expected to become 293.28 million in FY20E. International passenger grew YoY by 10.43 per cent to reach 65.48 million in FY18 and traffic is expected to become 76 million in FY20E.

## Current Development

India's aviation industry is expected to witness Rs 35,000 crore (US\$ 4.99 billion) investment in the next four years. The Indian government is planning to invest US\$ 1.83 billion for development of airport infrastructure along with aviation navigation services by 2026.

Indian aircraft Manufacture, Repair and Overhaul (MRO) service providers are exempted completely from customs and countervailing duties.

Government of India sanctioned the development of a new greenfield airport in Hirasar, Gujarat, with an estimated investment of Rs 1,405 crore (US\$ 194.73 million).

Government of India approved a proposal to manage six AAI airports under public private partnership (PPP). These airports are situated in Ahmedabad, Jaipur, Lucknow, Guwahati, Thiruvananthapuram and Mangaluru. AAI received 32 technical bids from ten companies.

Government of India's released the National Air Cargo Policy Outline 2019 which envisages making Indian air cargo and logistics the most efficient, seamless and cost and time effective globally by the end of the next decade.

## Future Plans

AAI is going to invest Rs 15,000 crore (US\$ 2.32 billion) in 2018-19 for expanding existing terminals and constructing 15 new ones.

The AAI plans to develop Guwahati as an inter-regional hub and Agartala, Imphal and Dibrugarh as intra-regional hubs.

Government of India is working on a blueprint to promote domestic manufacturing of aircrafts and aircraft financing within the country.

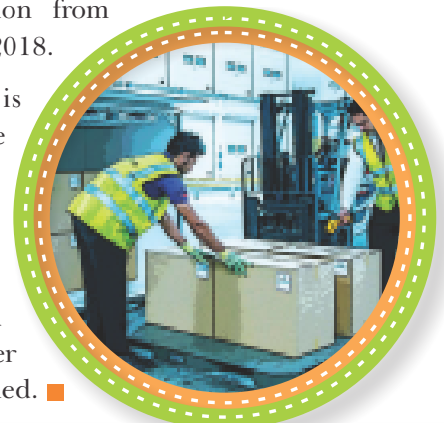
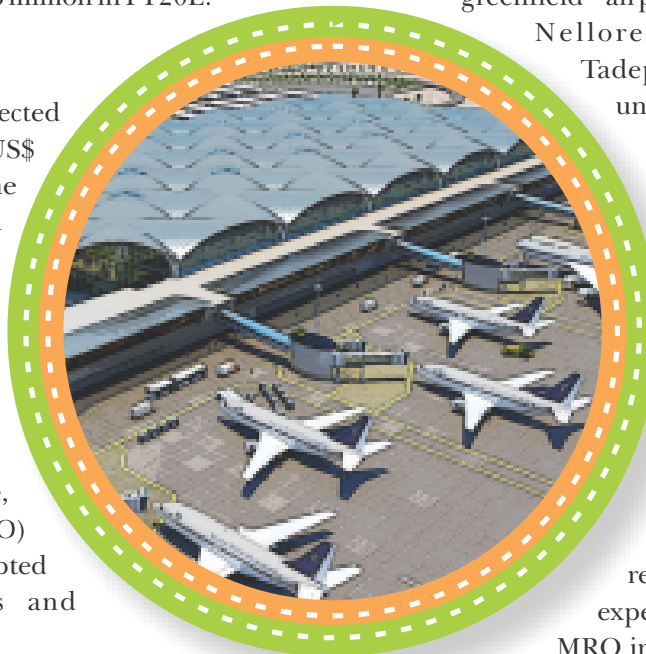
The Government of Andhra Pradesh is to develop greenfield airports in six cities-Nizamabad, Nellore, Kurnool, Ramagundam, Tadepalligudem and Kothagudem under the PPP model.

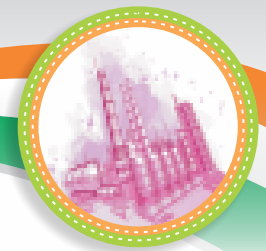
The Airports Authority of India (AAI) aims to bring around 250 airports under operation across the country by 2022. Investments to the tune of Rs 420-450 billion (US\$ 5.99-6.41 billion) are expected in India's airport infrastructure between FY18-23.

Expenditure in MRO accounts for 12-15 per cent of total revenues; it is the second-highest expense after fuel cost. By 2028, the MRO industry is likely to grow over US\$ 2.4 billion from

US\$ 800 million in 2018.

By 2036, India is projected to have 480 million flyers, which will be more than that of Japan (just under 225 million) and Germany (just over 200 million) combined. ■





## Introduction

India retained its spot as the third-largest energy consumer in the world with oil and gas accounting for 37 per cent of its total energy consumption. Annual oil consumption stood at 4.69 million barrels per day (MBPD) and 54.20 billion cubic meters (bcm) of gas. By 2035, India's energy demand is expected to double to 1,516 Mtoe by 2035 from 753.7Mtoe in 2017. According to the International Energy Agency (IEA), India is expected to account for almost one-third of the global growth in energy demand by 2040.

India has proven oil reserves of 600 million metric tonnes (MMT), and gas reserves of 1.2 trillion cubic meters. Production of crude oil and natural gas during 2017-18 reached 0.64 mbpd and 31.63 bcm, respectively. Production of crude oil reached 0.46 mbpd during April-November 2018. Natural gas production during April-October 2018 stood at 18.59 bcm.

India is expected to be one of the largest contributors to non-OECD petroleum consumption growth globally. Oil imports rose sharply to US\$ 87.37 billion in 2017-18 from US\$ 70.72 billion in 2016-17. India retained its spot as the third largest consumer of oil in the world in 2017 with consumption of 4.69 mbpd of oil in 2017, compared to 4.56 mbpd in 2016.

India has 23 refineries, out of which 18 are in the public sector, two in the joint sector and three in the private sector.

India was the fourth-largest Liquefied Natural Gas (LNG) importer in 2017 after Japan, South Korea and China. LNG imports increased to 26.11 bcm in 2017-18 from 24.48 bcm in 2016-17.

Gas pipeline infrastructure in the

country stood at 16,771 km at the beginning of September 2018.

## Current Developments

The industry is expected to attract US\$ 25 billion investments in exploration and production by 2022.

India is one of the largest exporters of refinery products due to the presence of various refineries. The country had the fourth largest oil refining capacity and fourth largest refinery throughput globally in 2017. Refining capacity in the country is expected to increase to 667 MTPA by 2040.

India has a flourishing crude oil refining industry with an annual capacity of 249.40 MMT, as of Dec 1, 2018. India's oil consumption is expected to grow 129 per cent during 2016-2040.

The Government of Gujarat selected Energy Infrastructure Limited (EIL), a subsidiary of the Netherlands-based Energy Infrastructure Butano (Asia) BV, to set up a Liquefied Petroleum Gas (LPG) terminal at Okha with an investment of Rs 700 crore (US\$ 104.42 million).

## Future Plans

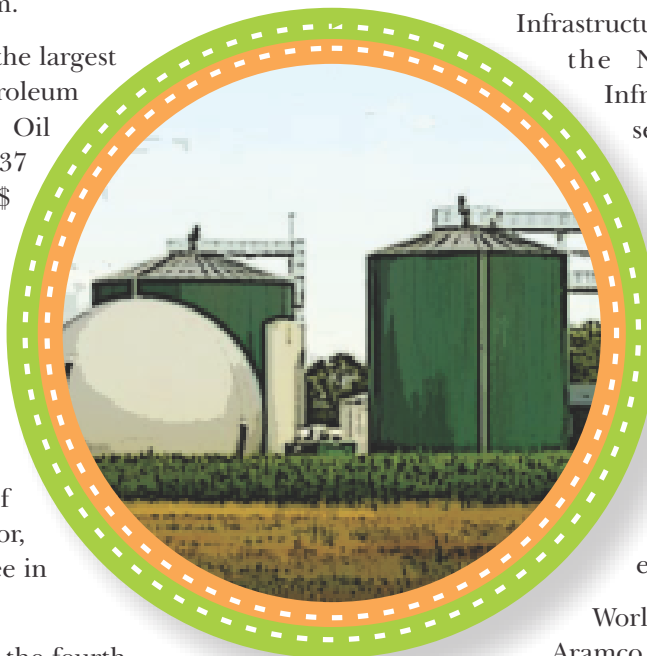
The government is planning to invest US\$ 2.86 billion in the upstream oil and gas production to double the natural gas production to 60 bcm and drill more than 120 exploration wells by 2022.

World's largest oil exporter Saudi Aramco is planning to invest in refineries and petrochemicals in India as it looks to enter into a strategic partnership with the country.

The Government of India is planning to set up around 5,000 compressed bio gas (CBG) plants by 2023.

Government of India is planning to invest Rs 70,000 crore (US\$ 9.97 billion) to expand the gas pipeline network across the country.

The Oil Ministry plans to set up bio-CNG (compressed natural gas) plants and allied infrastructure at a cost of Rs 7,000 crore (US\$ 1.10 billion) to promote the use of clean fuel. ■





# 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.



## KRS Infra Ventures Private Limited

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