One Mega Event

— 5 Expos —

Pragati Maidan, New Delhi
23-25 May 2018

2nd BUILDINGS
India 2018 Expo

3rd SOLAR
India 2018 Expo

5th WATER
India 2018 Expo

3rd TRANSPORT
India 2018 Expo

4th Smart Cities
India 2018 Expo

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2nd BUILDINGS India 2018 Expo | **3rd SOLAR** India 2018 Expo | **3rd TRANSPORT** India 2018 Expo | **4th Smart Cities India 2018 Expo** | **5th WATER** India 2018 Expo

www.buildingsindia.com | www.solarindiaexpo.com | www.transportindiaexpo.com | www.smartcitiesindia.com | www.waterindia.com

Dear Industry Colleagues,

Launched in 2015, and hosted by the India Trade Promotion Organisation (ITPO) & Exhibitions India Group, this Mega Event incorporates five expos with the view to develop attractive, safe and smart cities that evoke pride, passion and a sense of belonging among citizens:

- 2nd Buildings India expo
- 3rd Solar India expo
- 3rd Transport India expo
- 4th Smart Cities India expo
- 5th Water India expo

One Mega Event is the largest trade show and conference of its kind in the country to attract industry experts and leaders from the city, government and community to share their views and proposals to make cities more sustainable, efficient, transparent, and, above all, enhance the quality of life of its residents.

From ground-breaking start-ups to blue-chip multinationals, companies from 40 countries unveil the latest in technology products and services across 20,000 square metres of exposition space.

In his congratulatory message to the Exhibitions India Group for hosting *One Mega Event* 2017, Prime Minister Shri Narendra Modi wrote, "Our Government's urban development initiatives are aimed at creating state-of-the-art urban spaces. Whether it is the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) or Smart Cities Mission or Pradhan Mantri Awas Yojana – Housing for All (urban), the welfare of our citizens is central to all initiatives," adding that it is commendable that *One Mega Event* aims to provide a platform for interactions on various aspects of urban development. "Such a forum will help the industries and policymakers to learn from the expertise of each other and explore the latest technologies."

India's urban population is expected to increase to 843 million by 2050 – accounting for about 50% of the population. The Prime Minister's Smart Cities Mission is part of the overall strategy to accommodate the massive urbanisation that is expected in the future. The Centre's mission to develop smart cities opens up big opportunities for the private sector.

One Mega Event features action-packed conference sessions, panel discussions, plenary sessions, and provides opportunities for one-to-one meetings, group discussions and networking activities. A full line-up of over 50 conference sessions enables delegates to collaborate and share best practices across a wide range of smart technology areas. A world-class exhibit space ensures an experiential trade show for all those involved in promoting efficient buildings, solar power, smart transportation, smart cities and smart water management.

This trade show brings together global industry leaders, exhibitors, industry associations, speakers, government administrators, municipal bodies, urban planning experts, investors, pioneers, technology innovators, architects, academia and the media to envision the cities of tomorrow. Government and business delegations from all across the globe will attend the expo.

One Mega Event is ranked number 1 on Google listings, and is considered a must-attend event in this genre worldwide.

We will be delighted to receive your expression of interest to participate in the expo.

Sincerely,

Prem Behl
Chairman
Exhibitions India Group

Buildings generally consume high amounts of electricity and water. Buildings in India specifically consume 35 percent of the total electricity and 40 percent of the water supplied. This pattern is increasing due to changing lifestyles, demand for air conditioners, gadgets, appliances, etc. Hence, developers are focusing on constructing smart buildings to provide inhabitants an enhanced living experience.

Green Buildings

Apart from being sustainable and efficient in saving energy, water and materials, Green buildings reduce the impact on human health and the environment for their entire lifecycle. It is estimated that a green building will save upto 30-40 percent of electricity consumption and 30 percent of water. Building maintenance costs could also be reduced by 10-30 percent.

India's green building footprint has emerged as the second largest in the world, and can go up to 10 billion square feet by 2022. The green building industry in India is expected to grow by 20 percent in the next three years, increasing the scope for green building materials in the country.

Connected or smart homes are those that control appliances, lighting, air conditioning, ventilation, security, etc., remotely via W-Fi. Connected homes are driving demand for sensors and control technologies, mobile applications, data management, analytics, cloud computing, etc.

Smart Appliances

Smart appliances are those that connect to smart phones, tablets or computers to give more information and control. Machine-to-machine communication, and large-scale digitisation is expected to provide new growth opportunities to players in the smart appliances market. Televisions, fridges, kitchen appliances, robotic vacuum cleaners, air conditioners, smart security systems, etc., are examples of smart appliances. The Indian consumer electronics and appliances market is projected to be worth US$ 20.6 billion by 2020.

Smart Lighting

The Indian lighting industry will be worth US$ 5.22 billion by 2020. The domestic light emitting diode (LED) industry is expected to touch US$ 3.22 billion by 2020 on the back of the government's decision to switch to LED for all street lamps and public space lighting. The Indian LED lighting industry is growing rapidly, as customers are switching from incandescent light bulbs to LED bulbs due to their energy efficiency and environmentally friendly nature.

Housing for all (Pradhan Mantri Awas Yojna)

The Government of India's *Housing for All* scheme is now called *Pradhan Mantri Awas Yojna (PMAY)*. The government plans to construct 29.5 million houses in rural areas under this scheme, for which the financial assistance is around US$ 2,000 per family. The government plans to provide assistance for 10 million households by FY 2018-19 at an estimated cost of around US$ 12 billion, out of which US$ 10 billion will be provided by budgetary allocation, and the rest will be borrowed from the National Bank for Agriculture and Rural Development (NABARD).
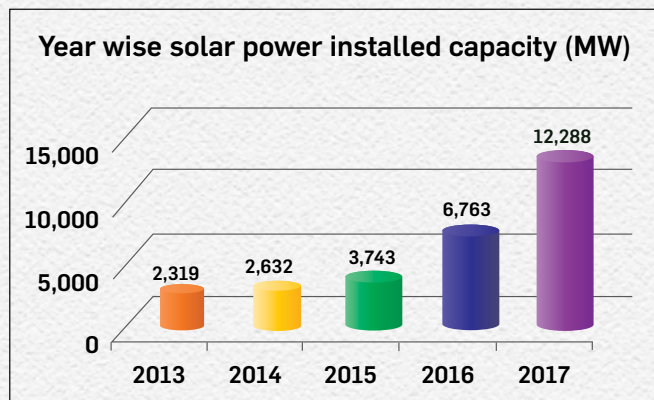
3rd SOLAR India 2018 Expo

www.solarindiaexpo.com

23 24 25 May 2018
Pragati Maidan, New Delhi
Solar Energy for a Sustainable Future

An average of 250-300 sunny days a year (approximately 3,000 hours of sunshine) provides a solar power potential of 748 GW per annum, which means India can be a solar power producing country.

Year wise solar power installed capacity (MW)

Year	Capacity (MW)
2013	2,319
2014	2,632
2015	3,743
2016	6,763
2017	12,288

Growth

The Indian solar power industry is growing rapidly, with cumulative solar grid capacity growing by 82% over the last fiscal year (from 6.76 GW in 2016 to 12.28 GW in 2017).

The government plans large investments of around US$ 100 billion in solar power. Financial institutions too, including the European Investment Bank (EIB) are considering providing US$ 61 million (EUR 56m) to finance the construction of a 100-MW photovoltaic (PV) plant in Telangana, India. Private equity funds, including Actis LLP, will invest in green energy platforms in India.

Goals

Rooftop and ground mounted solar power installed capacity is targetted to be 100 GW by 2022, in which rooftop installations will contribute upto 40 GW.

Battery storage is expected to play a crucial role in India's sustainable energy future, with the government encouraging the manufacture of cost effective batteries under the *Make in India* initiative.

Solar cities are in the works. There are plans to develop 60 solar cities and 33 solar parks.

Smart villages will be developed (2,500 smart villages by 2019), incorporating solar pumps for irrigation, solar water heaters, solar panels, connected with batteries for home and street lighting, etc.

Nano-grids for digitally connected homes.

Solar street lighting is fast becoming a reality.

Consumer products include solar water heaters, solar home lighting systems, solar lanterns, solar pumps, solar mobile chargers, solar cookers, etc.

Commercial products include solar traffic signals, solar road studs / blinkers, etc.

Government to provide *24/7 Power for All* electricity supply to households, industries and commercial establishments.

Solar pumps to irrigate 2.85 million hectares of land in the Pradhan Mantri Krishi Sinchai Yojna (PMKSY) mission.

3rd TRANSPORT India 2018 Expo

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Pragati Maidan, New Delhi

Smarter Transport for a Sustainable Future

www.transportindiaexpo.com

India is the 5th largest automobile producer in the world, with a total of 25.32 million vehicles (including passenger & commercial vehicles, three-wheelers, two-wheelers and quadricycles) in 2016-17.

Air pollution in most Indian cities is at dangerous levels, affecting the health of citizens. The government plans to promote eco-friendly vehicles in the country, such as CNG-based, hybrid, and electric vehicles, and aims to make 5 percent ethanol blending in petrol mandatory.

Electric and hybrid vehicles: The government has formulated a scheme for Faster Adoption and Manufacture of Electric (FAME) and hybrid vehicles in India, under the National Electric Mobility Mission 2020 to encourage the progressive introduction of reliable, affordable, and efficient electric and hybrid vehicles in the country. The *Make in India* initiative is to push indigenous manufacturers for electric/hybrid vehicles, to have 6-7 million EVs and Hybrids on the roads.

Urban Mobility: With a rapidly growing urban population, the need for efficient and quality urban transportation (bus, metro, monorail, light rail systems, etc.) are vital for cities. The bus market in India is expected to be worth US$ 10.34 billion by 2020, while the monorail market is expected to reach US$ 15-20 billion within the next ten years.

The government has taken many initiatives to develop metro rail systems. Around 324kms of metro rail is now operational in Bengaluru, Chennai, Delhi NCR, Jaipur, Kolkata and Mumbai. 508kms is under construction, and there are proposals for 600kms in other cities.

Traffic Control Rooms are vital traffic management and information control centres, having requisite IT infrastructure (traffic signals, CCTV cameras, video walls, applications, visualisation tools, etc.) that support monitoring and management of traffic on the road network.

Smart Parking are automatic multi-storey car park systems using information technology, sensors, etc. Real-time parking management systems provide information on available parking lots.

Smart Railway Stations: The Indian Railways are expected to invest US$ 140 billion over the next five years to redevelop and upgrade 400 stations.

Connected / Autonomous Vehicles are the future, where connected cars provide seamless connectivity between different electronic systems (infotainment, control systems, etc.). Smart cards allow citizens to pay for public transport through a single device.

Fuel Cell Vehicles (FCVs) are different from batteries, as they require a constant source of fuel and oxygen to run, whereas they can produce continued electricity as long as these inputs are supplied. Fuel cells are 2 to 3 times more efficient than combustion engines.

Alternative Fuels / Vehicles are natural gas vehicles (NGVs), with multi-fuel engines capable of running on two fuels (one fuel is gasoline or diesel, and the other is an alternate fuel such as CNG/LPG or hydrogen).

Storage / Batteries used in electric cars, trucks, vans, buses, electric motorcycles, forklifts, electric golf carts, riding floor scrubbers, etc., are chargeable batteries routinely used through the day and fast-charged at night. The battery storage market in India is over US$ 1.3 billion annually.

4th Smart Cities India 2018 Expo

www.smartcitiesindia.com

23 24 25 May 2018

Pragati Maidan, New Delhi

Implementing Smart Cities…
Transforming India for our Citizens

Rapid migration, and population growth will continue to pose challenges to city planners, administrators and governments.

In India, it is estimated that 50 percent of the total population by 2030 will be in urban areas.

The Challenge

This urbanization will bring overcrowding, unemployment, increase in the number of slums, and the rates of crime, water scarcity, sewage and pollution problems, etc.

There will be pressure on existing infrastructure, such as housing, electricity and water supply, waste disposal, transport, etc.

Role of Technology

Technological infrastructure forms the building blocks of a smart city:

Digital cities combine a service oriented infrastructure, including innovative services and communication infrastructure to create an environment in which citizens are interconnected and can share information anywhere in the city.

Virtual city functions are implemented in cyberspace. A smart city exists through physical IT infrastructure of cables, data centers and exchanges.

Information cities collect and deliver local information to public portals for inhabitants to live and work on the Internet. An information city is an economic and social urban centre linking its people with civic services and government institutions.

Intelligent cities provide research and technological innovation to support learning and innovation. Human capital is the most precious resource, and every infrastructure (telecommunications, electronic and mechanical technology) is up to date to transform the daily life of citizens.

Ubiquitous cities (U-city) create an environment to connect citizens to any service through any device to make life easier for citizens, where citizens can get access to services anywhere and anytime.

The growth potential for technology services to meet the requirements generated by the Government of India is forecast at Rs. 7,000 crore. The government's emphasis on programs such as *Digital India*, *Make in India* and *Smart Cities* envisages the creation of over one million new jobs with IT and ITeS sectors emerging as major employers. Over a longer term horizon, the Government of India estimates that smart city projects can create a 10-15 percent rise in employment opportunities.

Quality of Life

Prime Minister Narendra Modi's *Smart Cities Mission* is intended to address the contemporary and future needs of India's urbanization areas by rejuvenating the urban system, improving urban infrastructure, and the quality of life of Indian citizens by providing sustainable and inclusive development, besides other things.

4th Smart Cities India 2018 expo supports PM Modi's vision to provide *Smarter Solutions for a Better Tomorrow.*

5th WATER
India 2018 Expo
www.waterindia.com

23 24 25 May 2018
Pragati Maidan, New Delhi
Clean Water for a Sustainable Future

17% of the world's population (1.3 billion) live in India, occupying 2.45% of the land area, with a meagre 4% of the world's water resources.

India ranks 133rd (out of 180 nations) for its water availability, and 120th (out of 122 nations) for its water quality.

It's estimated that 80 percent of India's surface water is polluted, resulting in India losing US$ 6 billion annually due to water-borne diseases.

Other challenges faced by India are increasing water consumption and wastage in urban areas, growing industrial and agricultural demand, lack of technology, water cycle imbalances, political and regulatory disputes, etc.

Water Crisis

Water crisis to worsen with an expected population of 1.7 billion by 2050.

Over 70% of the water consumed by the rural population in India does not meet WHO standards. Approximately 80% of rural illnesses, 21% of transmissible diseases, and 20% of deaths of children under the age of 5 are directly linked to the consumption of unsafe water.

Wastewater

An estimated 62,000 million litres per day (MLD) wastewater is generated in urban areas, while the treatment capacity across India is only 23,277 MLD, and actual treatment of water is a mere 18,883 MLD. Around 43,117 MLD of wastewater goes untreated.

There are over 800 municipal sewage treatment plants (STP's) across India, of which only 500 are in working condition.

Around 80% of water supplied for domestic use comes out as wastewater and is discharged untreated.

The major causes of water pollution are discharge of untreated sewage and industrial effluent into rivers, excessive use of fertilisers in agriculture, and contamination of ground water.

Most wastewater treatment plants are obsolete, and in need of newer technology and capacity expansion.

Opportunity

Capital expenditure on water and wastewater infrastructure in India is set to increase by 83% over the next five years, hitting an annual run rate of $16 billion by 2020.

The utility market is set to top $14 billion within five years, while annual spending in the industrial sector will approach $2 billion.

The wastewater treatment sector is expected to grow faster than water treatment, at a CAGR of 15.3% to reach $6.78 billion in 2020 (from $3.3 billion in 2015).

Spending on water supply will grow from $5.56 billion to $9.4 billion over the next five years.

Sanitation

Prime Minister Modi launched the Swachh Bharat Abhiyan on October 2, 2014 to reduce or eliminate open defecation by constructing 12 million toilets in rural India, at a projected cost of US$30 billion.

The allocation for Swachh Bharat Abhiyan in FY 2017-18 is US$ 2.5 billion.

Co-Organiser

India Trade Promotion Organisation (ITPO)
(A Government of India Enterprise)
Department of Commerce

ITPO, the premier trade promotion agency of the Ministry of Commerce & Industry, Govt. of India is committed to showcase excellence achieved by the country in diverse fields especially trade and commerce.

ITPO provides a wide spectrum of services to trade and industry and acts as a catalyst for growth of India's trade. ITPO approves holding of international trade fairs in India and regulates holding of various expositions in India primarily to avoid any duplication of efforts while ensuring proper timing. It manages India's world class exhibition complex which is constantly upgraded to keep it in a high standard of readiness.

Organiser

Ei

Exhibitions India Group
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Committed to Excellence

EIG is a trade promotion organization creating opportunities for investments, joint ventures and technology transfers. EIG acts as an interface between businesses, government, academia, society, media, etc.

EIG has been in existence since 1987, and is committed to providing satisfaction to its customers by organizing quality and focused international trade shows through exceptional services, employee involvement, market intelligence and continual improvement.