



Confederation of Indian Industry



4TH CII CLEAN TECH AND MOBILITY SUMMIT 2018



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Message from CII

Cleantech not only refers to just generation of Renewable Energy but also covers Water and Waste Water Management, Electronic Waste disposal, Recycling and Electric Mobility. The Clean tech range covers an array of products, services and processes that harness renewable materials and energy sources, dramatically reduce the use of natural resources, and cut or eliminate emissions and wastes.

India has witnessed significant growth in the clean technology market over the past few years. Rapid economic growth has substantially fuelled demand for energy countrywide. Issues such as global warming, climate change and pollution have exacerbated the need to adopt cleaner technologies, while the need for energy to power India's economic growth is rising. Energy storage is becoming a major player in the global energy market and will continue to grow for the foreseeable future. With demand largely driven by the telecom sector, grid applications, and electric vehicles, coming years are expected to be a breakthrough time for Energy Storage in India. The government is already putting its weight behind early adoption of electric vehicles, and these are set to increase demand for energy storage technologies, especially lithium-ion batteries. In order to provide a balance between economic growth, development and the environment; cleaner production strategies coupled with clean technologies is slated to increase resource efficiency, innovation, and reduced cost of environmental management. To this end, the need for adoption of cleaner technologies presents a relatively large opportunity for both domestic and international ventures looking to offer products and services in India. Renewable energy, energy efficiency, water and water waste management, and Electric Mobility are the most important drivers of clean technology in India.



With its conscious choice to use significantly more clean energy to fuel its growth, India's efforts demonstrate its serious commitment to mitigate climate change and with the Indian government launching a 'Clean India' mission, which aims to create Public Private Partnerships (PPP), the scope of entry into India's clean tech market remains high, in a large and industrially - growing country. There is a strong case to nurture an ecosystem that facilitates proliferation and promotion of Clean Technologies and we are proud to organise the fourth edition of CII Clean Tech & Mobility Summit to fulfil this purpose.

The summit aims to channelize deliberations to catalyse growth and investments in clean technologies, address pitfalls, uncover new trends and put forth solutions towards the development of Clean Tech industry.

I am sure the knowledge report will be an important reference point for industry stakeholders.

With best regards,

Anuj Khanna
Chairman, CII WUP Zonal Council &
Managing Director,
C&S Electric Ltd

Message from RTI International – India

India is the seventh-largest country by area, second-highest by population (with an age composition bulging into demographic dividend), sixth largest by GDP (as per World Bank), and growing between 6% to 8% per annum depending on which report you subscribe to! This kind of scale and pace brings its own challenges. And in the midst of those challenges lie some great opportunities.

We are home to nine out of the twenty most polluted cities in the World (WHO Report, PM2.5 in urban ambient air). We import a whopping 81% of our total crude oil consumption. Our coal, constituting mostly of inferior non-coking coal (67% of total coal deposits), emits excessive Particulate Matter (PM). For a country of the size as ours, Cleantech solutions for fulfilling our economic needs in a sustainable and environment friendly manner presents a huge business opportunity for players who are game for the challenge.

In 2017, 40 per cent of the growth of the world's energy demand was driven by just India and China (International Energy Agency). India targets to install up to 175 GW of renewable energy capacity by 2022 (or earlier), of which, 69.78 GW had been installed as on 31st March 2018. With focus on reducing air pollution from automobiles, Government as well as private companies are investing in Electric Vehicles. Indian auto industry became the 4th largest in the world with sales increasing 9.5 per cent year-on-year to 4.02 million units (excluding two wheelers) in 2017. India is also a prominent auto exporter and has strong export growth expectations for the near future. Govt schemes like FAME allocated ~USD 60 million over last 3 years. On the private sector front, Mahindra & Mahindra is planning to make an additional investment of ~USD 77 million for expanding the capacity for electric vehicles manufacturing.

Simply put, India, lays out an enormous market opportunity for cleantech products (eg, PV, EV, battery, etc.), services (eg, energy efficiency, distributed renewables, EV charging, etc.) and innovations (eg, green buildings, smart cities, waste-to-energy, etc.) in the cleantech sector – for Indian companies, foreign multinationals, and budding entrepreneurs. Further, such large scale business opportunities would have a positive rub-off on boosting employment, dissemination of new skills, financing opportunities for investors across the globe and at large, would help in global flow of capital, technology and talent. To harness this multi-billion dollar potential, Government and private players need to come together, adopt new age best practices, revamp obsolescent business models, and work at an altogether different, much higher, level of involvement and commitment to make this potential a reality!



Shalabh Srivastava
Country Director
RTI International – India



4th CII Clean Tech and Mobility Summit 2018

GLOBAL OVERVIEW: CLEANTECH

We believe that alignment of environment sustainability and economic development is possible and in fact inevitable. It is possible for people to live in harmony with nature by harnessing its potential for the benefit of mankind without undue exploitation leading to irretrievable damage and consequences that block the progress of future generations.

Environmental sustainability is fast becoming an integral component of growth strategy of every developing and developed nation, with the aim to transform into a low-carbon economy. This process entails more efficient use and management of all-natural resources including energy.

With increasing world population, bulging middle-class in the emerging countries, coupled with the rapid pace of urbanization and industrialization, **Clean Tech** is poised to drive the economies towards low carbon targets.

Clean tech refers to innovative technologies, products, services and solutions that enable the more efficient use and management of energy and natural resources, reducing waste while providing superior performance at lower or comparable costs¹. It covers:

- Clean energy and energy storage
- Green materials
- Energy and resource efficiency
- Sustainable agriculture
- Sustainable transport
- Water, land, and air quality
- Recycling & waste

Clean tech enables every type of organization, from start-ups to large corporations and national governments, to achieve growth, efficiency, sustainability and competitive advantage worldwide. This has led to innovation in technology, business models, financing mechanisms, cross-industry partnerships and its adoption by all organizations.



The global market size for clean technologies has been projected at \$1.3 trillion by 2022, and annual market for clean technologies in developing countries in the next 10 years has been forecasted to be \$640 billion, as per Asian Development Bank (ADB).

¹ Cleantech Start-Ups can solve Climate Change, ADB's Asia-Pacific Climate Technology Finance Center

Clean Tech in 2017

CONTINUE
THE UPRISING ?

Renewable energy witnessed several accomplishments in the year of 2017, marked by the largest ever increase in renewable power capacity, falling costs, increase in investment and advances in enabling technologies.

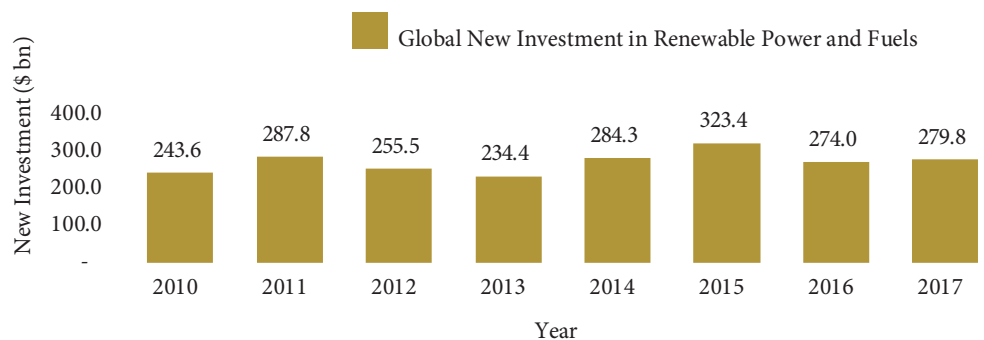
Table 1. Sector-wise global capacity addition in 2017²

Sector	Unit	2016	2017
Hydropower capacity	GW	1,095	1,114
Bio-power capacity	GW	114	122
Geothermal power capacity	GW	12.1	12.8
Solar PV capacity	GW	303	402
Wind power capacity	GW	487	539
Ocean energy capacity	GW	0.5	0.5
Concentrating solar thermal power (CSP) capacity	GW	4.8	4.9
Concentrating solar thermal power (CSP) capacity	GW	4.8	4.9

Solar photovoltaic (PV) capacity installations led the pack, accounting for nearly 55% of newly installed renewable power capacity in 2017 while wind secured the second spot. In the transport sector, the use of biofuels is still held back by sustainability debates, policy uncertainty and slow technological progress in advanced fuels, such as for aviation.

Figure 1 highlights the global new investment in renewables power and fuels, which was up by 2% in 2017. Investments are likely to go up with falling costs and promise of faster returns.

Figure 1 Global New Investment in Renewable Power and Fuels, 2010 to 2017³



² Renewables 2018, Global Status Report, REN21

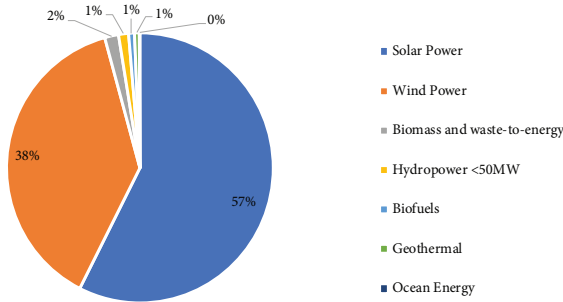
³ Global Trends in Renewable Energy Investment 2018, UN Environment's Economy Division, Frankfurt School-UNEP Collaborating Centre for Climate & Sustainable Energy Finance, and Bloomberg New Energy Finance



An auction for new capacity in Mexico established new record lows for onshore wind and solar photovoltaics, and for the first time zero-subsidy bids were recorded in European offshore wind auctions.

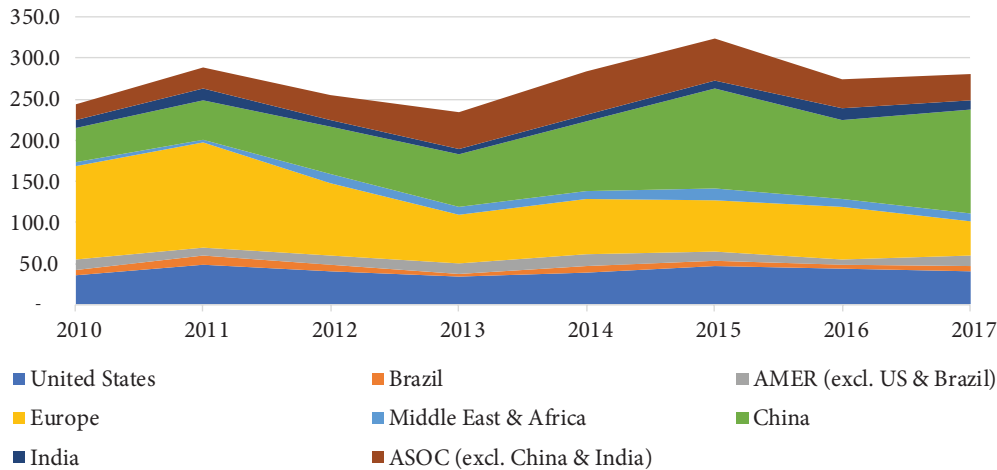
Figure 2, highlights how solar has outgrown wind from almost a similar size in 2010, to accounting for about 57% of the total investments in 2017. The figure also shows solar and wind dwarfing all other sectors, continuously over the period.

Figure 2 Global New Investment in Renewable Power and Fuels, by sector, 2017²



In Figure 3 Global New Investment in Renewable Power and Fuels, \$ bn, by geography, 2010 to 2017, investment destination has predominantly shifted from Europe to China. In 2010, Europe received the highest (~47%) of total global renewable investment with China attracting the 17% of the investments. While in 2017, we witnessed China picking up and leading the tally with 45% investments while Europe seems to consolidate the investments made in the earlier years of the decade, thus attracting the 15% investments in 2017. India has regained the initial status from capturing 4% investments in 2010 to 4% investments in 2017.

Figure 3 Global New Investment in Renewable Power and Fuels, \$ bn, by geography, 2010 to 2017³



The 'big three' of China, India and Brazil accounted for just over half of global investment in renewables excluding large hydro last year, with China alone representing 45%, up from 35% in 2016².

Among the leading markets seeing the biggest falls in investment last year were the U.K., down 65% at \$7.6 billion, Germany down 35% at \$10.4 billion, and Japan down 28% at \$13.4 billion. The U.S. slipped 6% to \$40.5 billion².





Select announcements/partnerships from across the world, possibly impacting the renewable/clean tech market include⁴:

1. In the context of the United Nations Sustainable Development Goals (SDGs), 2017 saw the creation of Sustainability Mobility for All (SUM4ALL), a new strategic global alliance that aims to implement the SDGs in the transport sector, including reducing the sector's environmental footprint to combat climate change and pollution.
2. Twenty-Five C40 member cities around the world established goals to reach net-zero emissions by 2050, with a focus on improving energy efficiency and increasing the use of renewable energy in urban buildings.
3. The global Electric Vehicles Initiative launched the EV30@30 Campaign, setting a collective goal of a 30% market share for electric vehicles (EVs) among all passenger cars, light commercial vehicles, buses and trucks by 2030, a target that can help open opportunities for greater use of renewable energy in the transport sector.

Table 2 Top 5 Countries in 2017, annual investment/ net capacity additions / production below, showcases the top five countries with Annual Investment / Net Capacity Additions / Production in 2017.

Table 2 Top 5 Countries in 2017, annual investment/ net capacity additions/ production⁴

Annual Investment / Net Capacity Additions / Production in 2017	1	2	3	4	5
Investment in renewable power and fuels (not including hydro over 50 MW)	China	United States	Japan	India	Germany
Hydropower capacity	China	Brazil	India	Angola	Turkey
Solar PV capacity	China	United States	India	Japan	Turkey
Wind power capacity	China	United States	Germany	United Kingdom	India
Solar water heating capacity	China	Turkey	India	Brazil	United States

Green Bonds are contributing to bridge the financing requirements of the Clean tech market as well.

Green bond issuance jumped 78% in 2017 to a record \$155.5 billion from an adjusted 2016 figure of \$87.2 billion. Green Bond Highlights 2017 report shows that the US, China and France led the way accounting for 56% of issuance between them. Germany, Spain, Sweden, Netherlands, India, Mexico and Canada filled out the remaining Top Ten positions⁵.

China and India dominated emerging economy issuance. Additional diversity is coming from new entrants, the sovereign green bonds from Fiji and Nigeria and steady progress in Brazil and across Latin America.

Indian issuers more than doubled, issuance volume to reach \$4.3 billion and break into the 2017 Top Ten table.

⁴ Renewables 2018, Global Status Report

⁵ Green Bond Highlights 2017 Report, Climate Bonds Initiative

ELECTRIC VEHICLES

Two technologies in mobility are poised to drive the disruption in the automotive market, electrification being the one, which has already started setting the footprints across the globe.

Shared Mobility is yet evolving and will shift markets over the next few years.

The global stock of electric cars crossed 3 million vehicles in 2017, after clocking 1 million vehicles in 2015 and the 2 million in 2016.

China recorded more than 50% of the total global sales in 2017, with EVs achieving a market share of 2.2%⁶. Electric cars sold in the Chinese market more than doubled the amount delivered in the United States, the second-largest electric car market globally.

Electrification of other transport modes is also developing quickly, especially for two-wheelers and buses. In 2017, sale of electric buses was about 1,00,000 and sale of two-wheelers is estimated at 30 million.

Developing countries view public charging infrastructure as a critical enabler for boosting electrification of mobility. Majority of the publicly accessible chargers are slow charging outlets, which totals to about 3,20,000 worldwide in 2017. They are complemented by more than 1,10,000 fast chargers⁶. Fast chargers are especially important in urban environments due to land availability constraints, such as in densely populated Asian cities.

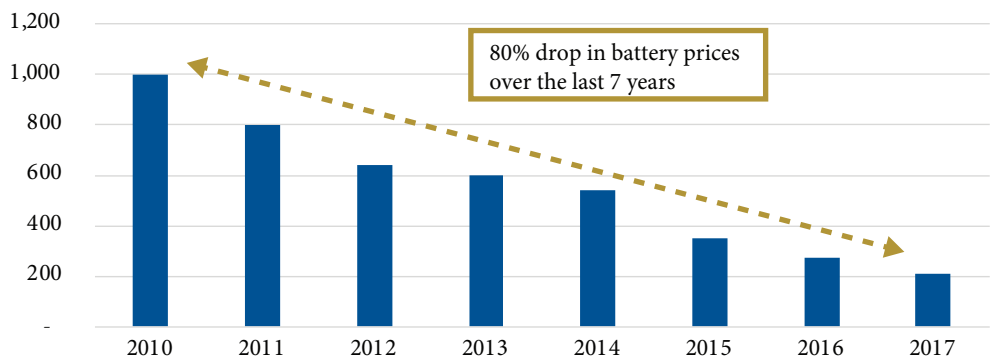


The EV30@30 Scenario sees 228 million EVs (excluding two and three-wheelers), mostly LDVs, by 2030; around 100 million more than in the New Policies Scenario .

Shenzhen in China is adopting EVs in phases. From 1 July, all ride-hailing vehicles should be EVs, and, by 31 December, all the remaining taxis should be replaced by EVs.

Battery cost is the major factor for high upfront cost of EVs. Continued investments in research and development of large scale manufacturing of batteries confirms that there is increasing confidence in the future of electric mobility and that augmenting production capacity is likely to catalyse further reductions in battery cost.

Figure 4 Lithium-Ion Battery Pack Price, Global Average, \$ per KWH⁶



⁶ Global EV Outlook 2018, International Energy Agency

Emerging Trends and Innovations across the Globe

National and Sub-national governments, along with the support of multilaterals and corporates are boosting the confidence of start-ups and innovators in clean tech.

Start-ups are the major driving force for scaling up the clean tech sector but enabling them to access finance is an important tipping point. Top five countries as per the Global Clean tech Innovation Index are summarised as below, along with India's standings.

Table 3 Global Cleantech Innovation Index⁷

2017 Rank	Country	2017 Score
1	Denmark	4.07
2	Finland	3.96
3	Sweden	3.86
4	Canada	3.76
5	United States	3.59
29	India	1.22

India needs to dramatically improve clean tech R&D budget and the presence of clean tech organisations and clusters to improve its standings.

Smart Solutions for Sustainable Cities

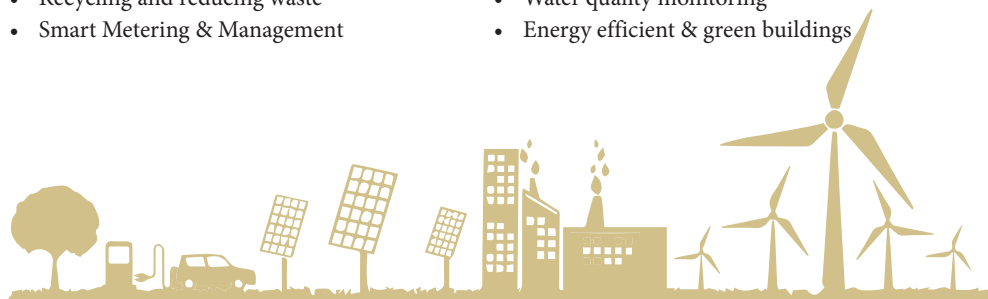
The Government of India (GoI) has launched the Smart Cities Mission to develop 100 cities across the country making them citizen friendly, resilient and sustainable.

The mission aims to create an impact on over 99 million people, with a total of INR 2,03,172 Cr. to be invested in these projects⁸.

The objective of Smart Cities Mission is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart Solutions'. The focus is on sustainable and inclusive development and the idea is to look at local areas, create a replicable model which will act like a light house to other aspiring cities.

Smart solutions for sustainable cities may include:

- Waste to Energy/ Fuel/ Compost
- Recycling and reducing waste
- Smart Metering & Management
- Leakage identification and prevention
- Water quality monitoring
- Energy efficient & green buildings



A glimpse of select innovative start-ups making cities sustainable across the globe include:

1. Pipeline Network is a developer of an Internet of Things (IoT) cellular network. The Malaysian start-up sourced USD\$1 million in seed funding in 2016. The firm offers different tailored applications of its IoT network, with examples of industrial applications including empowering data in the agricultural sector to improve farming efficiency and using its 'Pipeline Cloud' to enable companies to improve their transport logistics, lower their OPEX and also improve road safety.
2. Kodeco is the developer of Ecotour, an emissions-free, solarself-powered passenger car that does not need to attach itself to any charging stations. The company also featured among the GCIP Turkey finalists in 2015. Now, its applications range from vacation villages to factories to nature parks.
3. NG Biyoteknoloji (Biotechnology) develops, manufactures and sells microbial products for bioremediation of organic pollutants in land and water. This product has been tested and launched to agricultural farmers, allowing their certification as 'best practices' farming.

⁷ Global Cleantech Innovation Programme (GCIP) Country Innovation Profiles, UNIDO, GEF, Cleantech Group, WWF

⁸ Smart Cities Portal, Government of India

Clean Tech in India

World Bank has recently named India as the World's Sixth Largest Economy⁹ and one of the fastest growing economies in the world, characterised with rapid urbanization and industrialisation, coupled with a large population. United Nations Environment Programme (UNEP) has recognized India as one of the countries on course to achieving its voluntary goal¹⁰ of emission reduction.

To continue following the growth trajectory, India faces the challenge of meeting its energy requirements while adopting a sustainable low-carbon development path.

India has also declared the following goals:

- Voluntary goal of reducing the emissions intensity of its GDP by 20–25%, over 2005 levels, by 2020, despite having no binding mitigation obligations as per the Convention.
- Target of 175 GW of renewable energy by 2022: 100 GW [40 GW rooftop solar and 60 GW grid connected, ground mounted solar], 60 GW (wind), 10 GW (biomass), and 5 GW (small hydro)¹¹.



Climate financing by the world's six largest multilateral development banks in India accounts for about 8.70% (US\$ 7.6 bn of US\$87.8 bn) of the total commitments across the globe in the 2015 to 2017 cumulatively.

India's efforts to build resilient and sustainable nation include the push for developing resilient urban centers through Smart Cities Mission, AMRUT, HRIDAY and Dedicated Freight Corridors (DFCs); Initiatives like Green India Mission (GIM) and India has recently formulated Green Highways (Plantation & Maintenance) Policy which aim to further increase the forest/tree cover, etc.

A preliminary estimate suggests that at least USD 2.5 trillion (at 2014-15 prices) will be required for meeting India's climate change actions between 2015 and 2030¹².



India has opened several opportunities in the clean tech sector. A few start-ups are working in the clean tech sector and have been supported by the Infuse Ventures, with support from the Asian Development Bank and other partners. Snapshot of a few start-ups are enlisted below:

1. Clytics uses behavioral sciences, data analytics & machine learning to provide disaggregated & simulated energy consumption information to consumers & utilities, eventually bringing better energy efficiency.
2. Promethean's ChillerMate technology recovers waste heat from industrial chiller units, helping them save upto 75% of their water heating costs.
3. Ecolibrium Energy helps enterprises embrace the digital era with easily implementable IoT and AI based solutions for substantial energy savings, and enhanced asset productivity.

⁹ Global Economic Prospects: The Turning of the Tide? June 2018, World Bank Group

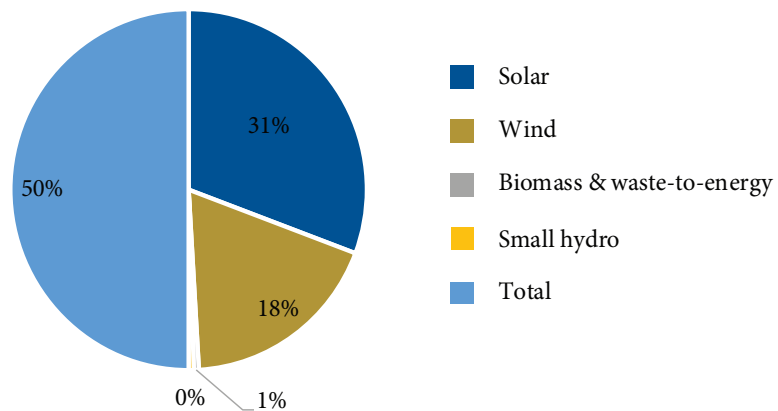
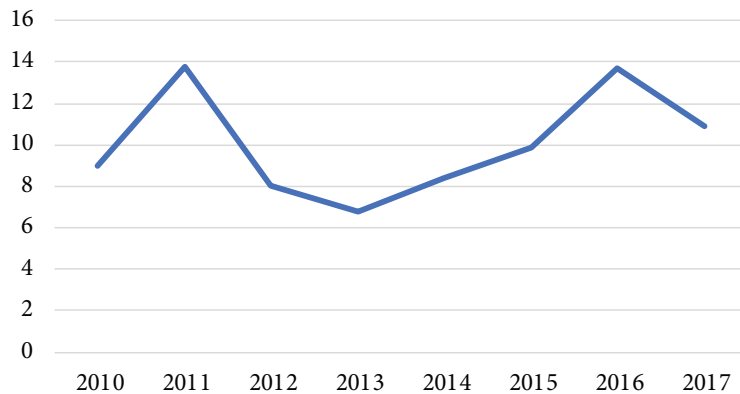
¹⁰ UNEP - Emission Gap Report 2017

¹¹ Ministry of New and Renewable Energy, Government of India

¹² India's Intended Nationally Determined Contribution, to UNFCCC

India ranked fourth in terms of global investment in renewables across the globe. In the medium term, PV installations look set to increase sharply, as India seeks to hit its ambitious target of 100GW of solar by 2022. However, that acceleration did not materialize in 2017 because of the unexpected rise in the cost of PV modules.

Figure 5 New Investment in renewable power and fuels in India, \$ bn, 2010 to 2017¹³ and Sector-wise investment share in 2017¹⁴



Following the global trends, solar took the major share of investments in India as well, with wind being the second highest.

¹³ Global Trends in Renewable Energy Investment 2018, UN Environment's Economy Division, Frankfurt School-UNEP Collaborating Centre for Climate & Sustainable Energy Finance, and Bloomberg New Energy Finance

¹⁴ Renewables 2018, Global Status Report, REN21

Mobility: Charging the EVs in India

In view of deteriorating air quality in cities and looming risks of climate change, worldwide significant are going on to promote Electric Vehicles (EVs) as a major mode of surface transport shifting from fossil fuel consuming Internal Combustion Engine (ICE) driven vehicles. Also, the cost of operation and maintenance is less in case of EVs as compared to traditional ICE vehicles.

- a) India can save 64% of anticipated passenger road-based, mobility-related energy demand and 37% of carbon emissions in 2030 by pursuing a shared, electric, and connected mobility future.
- b) To reduce vehicular emissions of particulate matter, polluting gases and GHGs
- c) To reduce petroleum imports and thus decrease the Current Account Deficit
 - i. Import of crude oil accounts for about 85% of India's petroleum supply [MOSPI].
- d) To achieve effective off-take of increasing volume of grid-connected renewable energy and reduce carbon footprint of the economy
 - i. India's renewable energy generation capacity (including large and small hydro) has reached more than 105 GW which thus constitutes about 32% of the total power generation capacity [MoP]

In view of the envisaged positive impacts and advantages of EVs, the Government of India (GoI) has endorsed and is supporting adoption of EVs. To this end, in May 2017, the National Institution for Transforming India (NITI Aayog) outlined a vision for the transformation of mobility in the country, proposing a set of actionable and specific solutions to accelerate India's leadership in advanced mobility (NITI Aayog and Rocky Mountain Institute, 2017).

India, is yet, to release a policy for electric vehicles at the national level. While at the sub-national level, the States of Karnataka and Maharashtra have already come up with a policy for electric vehicles. These two states can pioneer the sector and serve as a guide to other states.

In addition to reducing energy demand, this transformation yields other benefits, including lower congestion as shared, public, and nonmotorized modes of transportation serve an increasing share of mobility demand. With a larger share of the fleet running on electricity, it leads to lower local emissions, improving public health. This has significant implications for India's electricity sector and economy, supporting India's ambitious renewable energy goals while saving money, providing jobs, and strengthening Indian industry.



The second phase of FAME envisages to provide a boost to the EV industry with several interventions on the demand and supply side, including R&D efforts.

Recently, the tax rate on lithium ion batteries has been lowered to 18 per cent from 28 per cent in a bid to boost prospects of electric vehicles. Tax on fuel cell vehicles has been lowered to 12 per cent from 28 per cent.

Current Scenario of Electrifying Mobility in India

India has seen an upward trend in the stock of electric vehicles, up by 42% in 2017 on 2016 figures¹⁵. As India moves to electrify the mobility to ramp up its share, publicly accessible charging infrastructure needs to be developed. India had just 222 charging points in 2017.



Electrifying the Public Transportation on Priority

Public transport, mainly buses, contribute heavily to the total emissions as they run on diesel and are highly used. Buses should be electrified on priority as they represent a higher volume of miles travelled although they are less in number as compared to the number of personal-use vehicles in India. According to a report by World Economic Forum, personal use vehicles are on the road less than 5% of the time, representing a low volume of overall miles driven.

Government of India is aggressively pursuing the strategy for the introduction of electric vehicles in India. The first phase of FAME (Faster Adoption and Manufacturing of Hybrid & Electric Vehicles) has been extended until either end-September 2018, or until the second phase comes into operation. Shimla introduced the electric buses for commercial use in October 2017, followed by BEST Mumbai started the operation of 6 electric buses in Mumbai in November 2017. Further, Ola launched a pilot project in Nagpur, Maharashtra to operate multi-modal electric fleet operation. In December 2017, the government has selected 11 cities for pilot project for multi-modal public transport network.

¹⁵ Global EV Outlook 2018, International Energy Agency

Way forward

India, being the seventh-largest country by area, second-most populous country with a large cohort of youth adults and one of the fastest growing economies across the globe, opens up a huge market opportunity for the clean tech sector, especially for the PV, battery, electric vehicles, energy efficiency services, waste management solutions and technological innovations.

With rapid urbanization and industrialisation, bulging middle-class and rising income levels, innovative and sustainable solutions are fast becoming popular in India.

There seems to be a huge upside for the investors in the clean tech sector, enabling large corporates and start-ups to access finance, with strong policy support from the national and state governments and its affiliates. The development in the clean tech sector is poised to spur employment and dissemination of skills for the New India.

What is needed to harness this potential is an enabling policy environment by the Government, a certain streak of bold investments by the private sector, and sheer grit and determination by the Indian talent pool to work diligently to make the cleantech sector the next growth engine for the Indian economy. All ingredients are falling in place, and the timing seems just right! We could be poised for a clean and rich future if all stakeholders play their part right.

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RTI International-India strives to address social and developmental issues through innovative and high-quality research. We aim to provide actionable solutions that improve the human condition and the environment in a sustainable manner. We maintain high ethical standards while conducting research, and providing related consultancy services, bringing measurable value to our clients and stretching the boundaries of science and technology for global good.

RTI International

Established in 1958, RTI International is an independent, non-profit research institute dedicated to improving the human condition. Clients rely on us to develop solutions that demand an objective and multidisciplinary approach - one that integrates expertise across the social and laboratory sciences, engineering, and international development.

Our work in India

Our work addresses some of the critical challenges facing the country - water, sanitation, waste management, public health, sustainable energy, and climate change. Gender equality, behavior change, communication sciences and innovation are other crosscutting themes that support all of our work.

Key projects in India

Access to Rural Energy in India, Monitoring and Evaluation, The Climate Group

RTI Provided independent monitoring and evaluation (M&E) services for the project Bijli — Clean Energy for All, that aimed to help reduce greenhouse gas emissions and connect rural households to cheaper, cleaner and reliable renewable energy. Qualitative and quantitative data showcased findings such as project contributing to a reduction of 8,759 tonnes of CO_{2e} per year across more than 4,300 households.

AT&C Loss Reduction, Uttar Pradesh Power Corporation Limited (UPPCL and U.P. State DISCOMs)

As the Technical Partner to a leading Energy Consulting firm, RTI is helping UPPCL DISCOMs to reduce their technical and commercial distribution losses; monitoring progress of Government's UDAY scheme-related activities using IT-enabled tools; and ushering in best-practices for DISCOM operations as suitable in the Indian context.

RTI has developed Municipal Solid Waste (MSW) Decision Support Tool (DST), a standardised statistical model to evaluate the financial and environmental costs and considerations for MSW management. This can be tailored for particular waste compositions across different countries and geographies.

Our strength lies in our depth of expertise and proven research methodologies across many areas of science and technology, data science, communication science, and other knowledge-enabling tools. We take pride in our independent assessment studies that are truly unbiased in approach and scientific in delivery.

Collaboration being a core institutional value, we would aim to continue partnering with other Indian organizations and institutes that mirror the same value system and bring complementary expertise.

For more information about our organization and our projects in India, please contact Vidit Varshney at 011-41287179, or write us at vvarshney@rti.org.

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Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has around 9000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from around 265 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

As a developmental institution working towards India's overall growth with a special focus on India@75 in 2022, the CII theme for 2018-19, **India RISE : Responsible. Inclusive. Sustainable. Entrepreneurial** emphasizes Industry's role in partnering Government to accelerate India's growth and development. The focus will be on key enablers such as job creation; skill development; financing growth; promoting next gen manufacturing; sustainability; corporate social responsibility and governance and transparency.

With 65 offices, including 9 Centres of Excellence, in India, and 11 overseas offices in Australia, Bahrain, China, Egypt, France, Germany, Iran, Singapore, South Africa, UK, and USA, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community.

Confederation of Indian Industry

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