ENERGY EFFICIENCY SERVICES LIMITED
A JV of PSUs under the Ministry of Power

INNOVATING ENERGY

ENERGY SECURITY: THE CATALYST FOR DRIVING COLLECTIVE CLIMATE ACTION @ COP27

ENERGY TRENDS

Top energy trends from India & across the globe

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Head International
Energy Efficiency Services Limited

Energy Efficiency Services Limited was established with the vision to enable universal access to sustainable energy solutions for a low carbon future, with significant economic and social impact. It is also implementing the world's largest non-subsidised energy efficiency portfolio across sectors like lighting, buildings, e-mobility, smart metering and agriculture. EESL's programmes have not only strengthened India's capabilities to withstand the vulnerabilities to climate change and its impacts, but have also digitalized the energy sector. As India's energy ecosystem proliferates, EESL will explore greater integration of energy efficiency in previously unexplored geographies.

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EDITORIAL TEAM

Animesh Mishra
Sumit Sharma
Disha Khosla
Karan Gupta
Fareen Choudhary
Jai Kumar
Ishita Agrawal

FOR EDITORIAL DETAILS AND ADVERTISEMENT ENQUIRIES

u_kgupta@eesl.co.in 011- 45801260

EDITOR's NOTE

Abhishek Gupta
Head International
Energy Efficiency Services Limited

Dear reader,

Energy Efficiency Services Limited was established with the vision to enable universal access to sustainable energy solutions for a low carbon future, with significant economic and social impact. It is also implementing the world's largest non-subsidised energy efficiency portfolio across sectors like lighting, buildings, e-mobility, smart metering and agriculture. EESL's programmes have not only strengthened India's capabilities to withstand the vulnerabilities to climate change and its impacts, but have also digitalized the energy sector. As India's energy ecosystem proliferates, EESL will explore greater integration of energy efficiency in previously unexplored geographies.

Globally, we have arrived at a critical point in our crusade against climate change. The awareness around ecological preservation is at an all-time high and efforts are underway by governments, multilateral bodies, and companies to stem the adverse impact of climate change. The COP27 summit in Egypt witnessed deliberations on solutions to address climate change, nature loss, and inequality.

India has showcased alacrity in its response to their global threat and has undertaken concrete measures to preserve its ecological balance. During the conference, it showcased Mission LiFE - Lifestyle for Environment - as a theme for the event. Mission LiFE brought into sharp focus on the unsustainable lifestyle of rich nations whose excessive consumption of resources is considered one of the key factors behind high cumulative historical emissions of greenhouse gases.

We have seen the advent of agile, innovative, and scalable solutions that are aiding India's transition to cleaner energy avenues. India has balanced the tightrope of development and environmental protection admirably, thanks to innovation in its policymaking, technology, and initiatives. This newsletter, themed "**Energy Security: The catalyst for driving collective climate action at COP27**" aims to devise pathways that can fuel the scaling and rapid implementation of clean energy solutions.

In the article, "**Energy efficiency, renewable energy and demand response for climate action**" we explore how effective, urgent, and impactful climate action will be built upon the pillars of renewable energy, climate financing and energy efficiency. The article "**Decarbonizing Development: a key component of global climate action agenda**" speaks about how decarbonizing development will demand deep transformations of economies and societies. In "I**ndia needs to unlock the true potential of renewable energy across sectors**" we discuss avenues for improving the growth component of green finance, uptake, and grid connectivity, which will help unlock renewable energy's true potential across sectors. And finally, "**Sustainability in energy use to mitigate climate change**" deconstructs the various clean energy solutions that are helping India take a leadership role in addressing climate change.

COP27 witnessed a consensus emerge on the need for scalable eco-solutions, just transition and optimum usage of energy to help achieve energy targets. The need of the hour now is for nations to come together, to avert the adverse effects of climate change. As the United Nations chief António Guterres remarked during the conference, "Cooperate or perish" are the only two options the world currently has.

ENERGY EFFICIENCY, RENEWABLE ENERGY AND DEMAND RESPONSE FOR CLIMATE ACTION

Nidhi Gupta
Associate Director
Environmental Design Solutions

The latest reports from the Intergovernmental Panel on Climate Change (IPCC) state that the combined pledge for action by over 190 countries is not enough to save the world from the disastrous consequences of global warming. This makes timely and effective climate action a global imperative. The recently concluded COP27 summit in Egypt witnessed a detailed dialogue from various stakeholders on solutions to address climate change, nature loss, and inequity. Now is the time to put words into action, for countries across the globe.

There are three avenues to achieving a worldwide reduction in emissions and consequently, stemming the rapid rise in global warming: Energy Efficiency, Renewable Energy and Demand Response.

Improvements in energy efficiency can contribute significantly towards the reduction in energy-related greenhouse gas emissions needed over the next two decades to meet international energy and climate goals. Over the last decade, energy efficiency with its multitude of benefits – emission reduction, energy savings and peak power demand avoidance has shown its immense potential in enhancing energy security and mitigating climate change. The high energy prices that we are witnessing today, bring out the benefits of greater energy efficiency in sharp contrast. Energy efficiency needs to now become a key cog in the climate action machinery across all sectors whether it be through low-carbon buildings (both embodied and operational), or low-emission manufacturing or low-emission transportation, etc.

There has also been a paradigm shift towards low-carbon sources of energy including wind, solar PV, hydropower and nuclear. Renewable energy witnessed a surge in the last few years, with more and more nations awakening to the advantages it offers. This shift is timely and highly critical. To realize the goal of net zero emissions by 2050, a large chunk of worldwide electricity generation must come from renewable sources, with solar PV and wind together driving the shift.

However, while we push towards increasing the share of renewable power in the global energy mix, its equally important to consider balancing demand and supply. The way we consume energy is changing and will continue change over the next decade. There is now a growing impetus on electrification of sectors (example cooking and transportation) on the pathway to decarbonization. Considering the growing electricity requirements, the change in electricity mix as well as an increasing flexibility and smartness of the grid; we can no longer isolate the goals and targets for energy efficiency and renewable energy. Neither can we negate the importance of demand-response when looking to flatten the overall load-curves of the country.

Energy efficiency, demand response and renewable energy need to be integrated in policies, programs, and implementation towards a common goal of net zero emissions. Further, additional metrics for grid-interactivity, demand and supply-response are need of the hour for a responsible net zero goal.

Procurement can be one of the policy levers to expedite the transition towards net zero emissions. The total volume of public procurement in India is estimated to constitute about thirty percent of GDP and hence the potential for shifting markets in the direction of a green economy is immense. Public procurement can be leveraged to fast-track adoption of integrated energy efficiency, demand response and renewable energy solutions. As a forward-looking policy that integrates requirements for energy-efficiency, net zero, demand response, renewable energy, grid-interactivity; in all construction under the purview of public procurement; may just be the push required to fast-track India on its commitments to reducing the economy's carbon intensity.

Effective, urgent, and impactful climate action will be built upon the pillars of renewable energy, energy efficiency and demand response. These three forces on the foundation of sustainable procurement will drive a shift towards a sustainable and energy secure future for our planet.

DECARBONIZING DEVELOPMENT: A KEY COMPONENT OF GLOBAL CLIMATE ACTION AGENDA

Amit Bhatt
Managing Director for India,
The International Council on
Clean Transportation (ICCT)

The recent IPCC reports have forewarned of cataclysmic consequences, if ambitious and effective climate action efforts are not undertaken by the nations across the globe. The world is now set to reach 1.5 degrees of warming in just the next two decades, and we need urgent interventions. One of the most promising avenues for reducing the global rise in temperature is a shift to renewable energy sources. Inexhaustible, clean and abundant, these energy sources are set to be the bedrock of all climate action efforts from now on. Secondly, there is a need to decarbonize development. While, economic growth and development cannot be put on hold, it is imperative to make it ecologically viable.

This can be achieved by planning for the end goal instead of short-term milestones. The net zero targets underlined by nations is a step in the right direction. It is important for governments to make proactive choices that act as the foundation for future development and steer clear of damaging development choices and investments that could become unusable in a carbon-constrained world.

In our increasingly urbanized cities, this means decarbonizing public transportation. An ICCT study envisaged and analyzed 'High Ambition and Aggressive Policy' scenarios for India to 2050 that align the country closer to path that limits warming to 1.5 °C. These scenarios include efficiency improvement in petrol and diesel motor vehicles, vehicle electrification with a low-carbon grid, increased use of alternative fuels, mode shift from private vehicles to public transport, and mode shift from road freight to electric rail.

The study indicates that India could lower emissions from the road transport sector by at least 25% (High Ambition path) or 50% (Aggressive Policy path) by 2050 compared to 2020 levels. India can also reverse the growth in emissions if it undertakes aggressive actions for vehicle electrification with continued efficiency improvements in petrol and diesel motor vehicles until 2050. According to ICCT research achieving such emissions reduction is possible. This will not only help in achieving climate goals but also improve the health of all people in India.

On the policy front, governments need to stimulate low-carbon growth and provide the right incentives to ensure low-carbon growth plans are implemented and green projects financed. Creation of a carbon market provides a clear pathway towards decarbonization. It is viable avenue to raise revenue while encouraging lower emissions. Efforts such as removing fossil fuel subsidies, implementing carbon taxes can generate considerable revenue that can lower costs of education, health care, and infrastructure, while also reducing carbon emissions at the same time.

Thus, decarbonizing development will demand deep transformations of economies and societies. It will require the development and implementation of long term, country-specific decarbonization strategies that go beyond environmental matters and encompass economic, social, and fiscal policies that can drive a metamorphosis.

INDIA NEEDS TO UNLOCK THE TRUE POTENTIAL OF RENEWABLE ENERGY ACROSS SECTORS

Mahesh Makhija
Director- Business Development and Commercial (Renewables),
Apraava Energy Private Limited Company

Of the many interventions and greening initiatives undertaken to address the problem of rising emissions, transitioning to Renewable Energy (RE) can help bring about an impactful change. India has set a RE capacity target of 500 GW by 2030, and currently stands at 152 GW as per the Ministry of New and Renewable energy. The policy landscape over the remainder of this decade is expected to favour rapid growth in the nation's RE sector. At COP27 summit, India has taken a stand that all types of fossil fuels should be removed from energy production cycle and not just coal. Instead of focusing only on one fossil fuel, a holistic approach will be more consistent with achieving both – energy and emission targets. After all, the primary objective of deploying RE is to advance economic development, improve energy security, improve access to energy, and mitigate adverse impact of climate change.

India's RE growth and opportunities

Over the years, India has developed its RE sector in its path to cutting emissions, while also fulfilling the ever-increasing demand for energy. Strong government support and the increasingly opportune economic situation have pushed the nation to be one of the most attractive renewable energy markets.

In the last seven years, India's RE capacity has more than tripled as of October 2022. Of the many achievements, the bio-power sector — which converts biomass fuels into heat and electricity — has exceeded its target, having achieved 107 per cent of its 10 GW target. The small hydro sector —which comprises hydroelectric units of a capacity of 25 MW or less — has also done well, with capacity at 98.5 per cent of its 5 GW target. While there has been some growth in all sectors of the renewable energy space since January 2017, the solar sector has driven the surge in overall capacity addition, having seen a near-seven-fold increase in capacity since then.

The growth of RE over the years, presents several opportunities in line with the government's forward-looking and fast-tracked policies, programs.

Green Finance, RE uptake and bridging grid connectivity gap

At COP26 meet in Glasgow, Prime Minister Narendra Modi set the Panchamrit targets, with top two promises of getting its non-fossil fuel based energy capacity to 500 GW by 2030 and meeting 50 per cent of its energy requirements till 2030 with renewable energy. While the liberal environment created to attract foreign investments has aided in the ramping up of RE capacity, easy availability of green finance to indigenous manufacturers will be key. The country needs to tap a growing pool of environmental, social and governance (ESG) financing, including green bonds. Even as public finance continues to play a major role in pushing green finance flows, private finance needs to be mobilized for the benefit of mitigation sectors such as EV and manufacturing. India's Intended Nationally Determined Contributions (INDCs) have set the target to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources. It also aims to reduce the emission intensity of its GDP by 33 to 35 percent from 2005 level by 2030. Ensuring the uptake of RE across sectors, both at the consumers and the supplier side of the spectrum will be an important factor to meet these ambitious goals.

Further, India's solar energy sector has emerged as a significant player in the grid connected power generation capacity over the years. It supports the government agenda of sustainable growth, while, emerging as an integral part of the solution to meet the nation's energy needs and an essential player for energy security. However, the biggest challenge with the country is its widely spread and uneven distribution of RE sources across different regions – this needs better coordination for the flow of power across state-run grids and calls for large investments not only in RE, but also in the transmission and distribution domains for augmenting and modernizing the grid network.

A renewable future

India's energy consumption will be the fastest among all significant economies by 2040, with coal meeting most of this demand followed by renewable energy. While RE has already become the second most significant source of domestic power production, overtaking gas and then oil in 2020, improving the growth component of green finance, uptake, and grid connectivity, will help unlock its true potential across sectors.

SUSTAINABILITY IN ENERGY USE TO MITIGATE CLIMATE CHANGE

Raman Garg
Chief Manager (Revamped Distribution Sector Scheme)
REC

Introduction

"*We don't have plan B because there is no planet B*" - Mr. Ban-ki Moon, erstwhile UN Secretary-General during COP event.

The Paris Agreement in December 2015, during CoP21 under the United Nations Framework Convention on Climate Change (UNFCCC), for the first time brought together major nations on a common understanding to undertake ambitious efforts to combat climate change and adapt to its effects, with explicit support to developing countries in doing so. The Agreement stipulates the global warming to be stabilized at well below 2°C above pre-industrial levels, with aim to limit this to 1.5°C. The same would require all constituents (India is a party to it) to put forward their best efforts through nationally determined contributions (NDCs) and strengthen these in the years ahead. It includes the requirement for all Parties to report regularly on their emissions and the implementation efforts.

COP commitments and Indian Standing

The developed economies are yet to deliver on their commitments to provide $100 billion per year in "climate finance" to help poorer nations in reducing their emission intensity. And, the only major win during COP27 may be the recognition that such funding doesn't help in mitigation of the climate impacts that these poorer countries are already witnessing, thus leading to agreement on a provision for a separate loss and damage fund. The same is being demanded, with the view that the extreme weather events are particularly debilitating for countries with poorer populations and fewer resources to rebuild.

In order to meet its increasing energy requirements with fast GDP growth, India has been exploring all types of energy sources, with particular focus on renewable energy. A recent PIB report highlighted India as amongst the top 5 best-performing countries on Climate Change Performance Index (CCPI), 2023 and best among G-20 nations. Further, the other 4 countries in the list i.e., Denmark, Sweden, Chile, and Morocco, are smaller countries. So, in effect, India ranks best amongst all large countries and is the only G-20 to be ranked within the top 10, by CCPI. Further, as per the report, India is on track to meet its 2030 emissions targets, which are compatible with a well-below 2°C scenario.

Indian Power Sector Progress

Considering that World-over there is a visible move towards electrification of energy requirements e.g., cooking, heating requirements, transportation (Electric Vehicles, Metro-rail, electrical train network), etc, focus on cleaning of the power sector value chain might be able to contribute sustainable value to the objective of lowering the emissions.

The first round of adoption of renewables in the country was led by wind power, particularly due to the availability of long coast-line, good wind resource availability and its market maturity. This resulted into India consistently ranking among top 5 countries, in the wind power space.

For the next round, the Government of India played a crucial role by development of a solar market through policy initiatives coupled with grant/cash support leading to the exponential growth in solar installations across the country, through:

1. Introduction of Feed-in-tariff mechanism to put focus on actual production and not just setting up the capacities
2. Announcement of tariff of ~Rs 18 p.u., with major burden being borne by Central Government
3. Involving PSUs like NTPC to support the commercial arrangements in this initiative, right from the start

From that stage, the segment has witnessed progressive reductions in specified capital costs by CERC based on the market trends, reducing the need for GoI support. Seeing that solar plants are providing jobs, leading to development of various allied industries, have no fuel dependency and with reduction in the generation costs, many State Governments announced the state level policies, further aiding to its development. Soon, the costs of setting up solar plants came crashing down and all new solar installations started to be based on competitive bidding, just like wind power plants earlier.

But the focus nowadays has shifted to the issues revolving around addressing the intermittency and the need to have base load characteristics, leading to hybrid wind-solar development with or without battery storage. Such requirements have led to the bids to cater to the round-the-clock as well as peaking power requirements, on the supply side. Further, the policy has been brought to promote "Green Hydrogen", which should provide further impetus to the greening of energy-use.

This does not however mean that it has been smooth sailing for renewables development, as there have been a lot of hiccups around issues like non-remunerative pricing of Renewable Energy Certificates, non-signing of PPAs, dis-honouring of signed PPAs, non-availability of land, higher burden of transmission charges on host state due to waiver of ISTS charges, BCD imposition on solar imports etc. In spite of these issues, the country has done exemplary work in development of renewables, which however solves just one part of the equation.

Cleaning Thermal Power

As per the CEA's National Electricity Plan, the country would need to depend upon the coal plants as base load for quite a long time, to meet its growing energy requirements. As coal plants by their very nature are polluting, the same was recognized and accordingly, the Ministry of Environment, Forest and Climate Change (MOEF&CC) notified the Environment (Protection) Amendment Rules, 2015 in December 2015 thereby introducing revised emission standards for Thermal Power Plants (TPPs). The revised emission standards were made applicable to existing as well as upcoming TPPs, with time till December 2017, to meet the emission norms. Meeting the revised emission standards required the TPPs to install or upgrade various emission control systems like:

a) Installation of Flue Gas Desulphurisation (FGD) system for limiting emissions of SO2

b) Installation of Selective Catalytic Reduction (SCR) system for limiting emissions of NOx

c) Modification in Electro Static Precipitator (ESP) to meet Suspended Particulate Matter norms

However, that the December 2015 notification was rushed without much discussions, is evident from the issues raised by Ministry of Power in 2017:

a) ~30 to 36 months may be required for design & engineering, approvals, funds arrangement, tendering, erection and commissioning of FGD.

b) implementation would need planned staggered shutdown, as all the plants may not be simultaneously put on shutdown.

c) assessment may be needed to understand the availability of technologies/suppliers/manpower in the Indian market to support such abrupt demand

d) availability of quality regents needed to operate these equipments e.g., limestone

e) for addressing Nox issue, while Selective Non-Catalytic Reduction (SNCR) and Selective Catalytic Reduction (SCR) are established globally, their effectiveness with Indian coal having high ash content is yet to be tested

In view of the foregoing, Ministry of Power proposed to push the timelines to 2022, but it was agreed that these 650 units comprising ~197 GW would need to meet the new emission norms as per an yearly plan drawn for them, starting with a few units in 2018 and culminating upto 2022.

Subsequently, however a taskforce constituted for the purpose divided these TPPs into 3 categories and MOEF&CC issued Environment (Protection) Second Amendment Rules 2022, effectively pushing the implementation deadline even further, as below:

Category	Location/ Area	Timelines for compliance (non-retiring units)		Last date for retirement for compliance exemption	
		Other than SO2 parameters	SO2 emissions	Other than SO2 parameters	SO2 emissions
A	Within 10 km radius of NCR or cities having million plus population	Dec 2022	Dec 2024	Dec 2022	Dec 2027
B	Within 10 km radius of Critically Polluted Areas or Non-Attainment cities	Dec 2023	Dec 2025	Dec 2025	
C	Other than A & B	Dec 2024	Dec 2026	Dec 2025	

Also, to ensure that these units adhere to the timelines now set, a penalty on per unit basis of sales had been set for non-compliance beyond the specified timelines.

The major reason for delay in take-off of action on implementation of emission control equipments has been the non-specification of the recovery mechanism for the costs to be incurred. While the initial notification to meet these requirements was issued in 2015, and revised notification in 2017, it was only in May 2018 that Ministry of Power issued directions to CERC to recognize, MOEFCC Notification requiring compliance of Environment (Protection) Amendment Rules, 2015 in the nature of "Change in law" event. Subsequently, Centre Electricity Regulation Commission (CERC) as part of the tariff regulations for 2019-2024, allowed for pass-through in tariff of the additional capital expenditure towards installation or upgradation of various emission control system alongwith its operational cost, thus laying down the path for commercial recovery of the costs involved.

While the installation of emission control equipments had been slow to take off, the same has now picked steam. As per a Nov 2022 report by CEA, out of a total of ~212 GW capacity:

1. 5914 MW has CFBC installed and 8780 MW capacity has installed FGD
2. 490 MW has been retired - these units were older than 35 years and belonged to Central/State sector
3. 1430 MW capacity set up by private sector claims compliance to SO2 norms
4. 88690 MW capacity units have placed the bids for implementation, while bids for 28132 MW capacity are under evaluation for award
5. Most of the balance capacity units are at various stages of feasibility study or preparation of tender specifications

Bids have also been awarded for a number of units older than 25 years. As all these plants belong to Central/State sector with cost-plus tariff structure, so there is possibility that the installation of emission control equipments takes another 3 to 5 years and then there may not be much life left for these plants and hence may have been avoidable through their early retirement planning.

Conclusion

While generation side has seen most of the action on the clean energy space, a number of successful and continuing activities are in progress in the distribution segment including energy efficiency in lighting load under UJALA scheme, Perform-Achieve-Trade scheme by Bureau of Energy Efficiency, primary focus on loss reduction under RDSS, promoting solarization of feeders/pumpsets under KUSUM and rooftop installations with net/gross-metering. All these initiatives taken together are contributing to the leadership role that the country has been playing to address climate change.

TOP ENERGY TRENDS FROM INDIA & ACROSS THE GLOBE

India among top 5 countries in global climate change performance index

India is ranked among the top five countries, and the best among the G-20 nations, under the global Climate Change Performance Index. Published annually since 2005, the Climate Change Performance Index (CCPI) is an independent monitoring tool for tracking the climate protection performance of 59 countries and the EU. India jumped two spots and is now ranked 8th as per the Climate Change Performance Index (CCPI, 2023). The latest report of CCPI, released at COP27 in November 2022, shows Denmark, Sweden, Chile and Morocco as the only four small countries that were ranked above India at fourth, fifth, sixth and seventh, respectively. The first, second and third ranks were not awarded to any country. In effect, therefore, India's rank is the best amongst all large economies. The top-5 rank globally reflects that India is implementing energy transition programmes such as renewable capacity installation at much faster rate than anywhere in the world.

800 million jobs could be impacted by climate change: Report

Deloitte's latest report, "Work toward net zero: The rise of the Green Collar workforce in a just transition," builds on modeling from Deloitte's Turning Point series to present a more detailed look at the impacts of decarbonization, specifically on jobs. More than 800 million jobs—about one-quarter of the global workforce—are highly vulnerable to being disrupted by climate change, from weather extremes to the impacts of transitioning to a low-carbon economy. However, policy makers and business leaders can unleash significant economic growth and help create more than 300 million new jobs around the world by 2050 by building a new Green Collar workforce and making decarbonization work. The research also finds that India's workforce and economy are especially vulnerable to the impacts of climate change, which means it has much to gain from an active transition to net zero.

Cop27 agrees historic 'loss and damage' fund for climate impact in developing countries

Developing countries celebrated as crucial climate talks ended with a historic deal on their most cherished climate goal: a global fund for "loss and damage", providing financial assistance to poor nations stricken by climate disaster. Many felt the deal fell well short on important issues. Loss and damage refers to the most severe impacts of extreme weather on the physical and social infrastructure of poor countries, and the financial assistance needed to rescue and rebuild them. It was the most contentious issue at the conference, and has been a long-running demand by developing countries since 1992. It is likely to take at least a year, until the next climate conference of the parties in United Arab Emirates in November 2023, to sort through some of the details of how the fund can work. There is also, so far, little money for the fund, as few nations have made significant pledges of cash for loss and damage.

India submits long-term low emission development strategy at COP27

India has submitted its Long-Term Low Emission Development Strategy to the United Nations Framework Convention on Climate Change (UNFCCC), during the ongoing 27th Conference of Parties (COP27), which is aimed at rational utilisation of national resources with due regard to energy security. The strategy was launched by Environment Minister Shri Bhupender Yadav, who is leading the Indian delegation to COP27 at Egypt's Sharm El-Sheikh. It further focuses on the increased use of biofuels, especially ethanol blending in petrol. The emission strategy also envisages maximising the use of green hydrogen fuel to drive the low carbon development of the transport sector. India's low emission strategy is further focused on improving energy efficiency by the Perform, Achieve and Trade (PAT) scheme, National Hydrogen Mission, high level of electrification in all relevant processes and activities, enhancing material efficiency and recycling leading to expansion of circular economy, and exploring options for hard-to-abate sectors, such as steel, cement, aluminium, and others.

India accelerating transition towards renewable energy: Report

The UK-based Energy and Climate Intelligence Unit's report, "Big Four: Are Major Emitters Downplaying Their Climate and Clean Energy Progress?", in conjunction with the UN climate summit in Egypt, predicts that at least three of the top four greenhouse gas emitters — China, the EU, and India — will move more quickly towards a clean energy economy than they have indicated in national plans or Nationally Determined Contributions (NDCs). The report states that interconnected global crises and market mechanisms are thought to be the main forces behind the global transition to renewable energy, electric vehicles, and low-carbon heating systems, particularly in these countries. The introduction of renewable energy, particularly solar energy, is accelerating quickly in India, according to the authors, and will drastically alter the country's electricity industry this decade. "Coal generation will become an increasingly unprofitable back-up for wind and solar, a function that will itself inevitably fall away as storage takes off," the report said.

Welcome! Shri Vishal Kapoor As The CEO EESL

We welcomed Mr. Vishal Kapoor as the Chief Executive Officer. He is an accomplished professional with a proven track record of managing large diverse teams, developing & implementing strategy, innovating, and formulating high-impact policy frameworks.

At EESL, Mr. Kapoor will strengthen the company's business and bring the necessary impetus to the large-scale adoption of energy efficiency by enabling strategic partnerships. Under his supervision, the company is bullish on exponential growth.

Vishal Kapoor to take charge as Chief Executive Officer of EESL

EESL, a joint venture of public sector undertakings under the ministry, has announced the appointment of Vishal Kapoor as the CEO," a statement said.

PTI | NOVEMBER 02, 2022 / 04:27 PM IST

Representative Image. (Source: Shutterstock)

Energy Efficiency Services Ltd (EESL) on Wednesday announced the appointment of Vishal Kapoor as its Chief Executive officer.

Kapoor has completed his tenure as Joint Secretary at the Ministry of Power.

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steering from the Indian Railways Institute of also has a masters degree from the National nced Management Program in Public Policy from

Vishal Kapoor joins as new CEO of EESL

Kapoor graduated with a degree in Mechanical Engineering from the Indian Railways Institute of Mechanical & Electrical Engineering (IRIMEE). Holding a Masters degree from National University of Singapore, he has also pursued the Advanced Management Program in Public Policy from Indian School of Business.

November 02, 2022, 20:36 IST

New Delhi: Energy Efficiency Services Ltd (EESL), a joint venture of power Public Sector Undertakings, announced the company has appointed Vishal Kapoor, a former Joint Secretary in the Ministry of Power, as its Chief Executive Officer (CEO).

Kapoor graduated with a degree in Mechanical Engineering from the Indian Railways Institute of Mechanical & Electrical Engineering (IRIMEE). Holding a Masters degree from National University of Singapore, he has also pursued the Advanced Management Program in Public Policy from Indian School of Business.

"EESL Group has been at the forefront of India's journey towards sustainability and self-reliance. The time is now ripe to recognize the potential of energy efficiency, demand side management, electric mobility, and renewables in India's energy matrix," Kapoor said, commenting on his appointment.

ET Energyworld.com From The Economic Times

as the key pillar in charge as the

Vishal Kapoor is new CEO of EESL

Energy Efficiency Services Limited (EESL) on Wednesday announced the appointment of Vishal Kapoor as its chief executive officer (CEO). Kapoor takes charge after completing his tenure as the joint secretary at the ministry of power. As joint secretary, he led various government interventions, schemes, and reforms in the distribution sector. He also spearheaded the cyber security and IT initiatives in the power sector.

He played an instrumental role in formulating the revamped distribution sector scheme for operational and financial turnaround of distribution utilities. Kapoor worked with the India Railways in various capacities in design, operations and maintenance of rolling stock of

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SWATI LUTHRA

Former Power Ministry Joint Secretary Vishal Kapoor Takes Charge as CEO of EESL

After completing his tenure as Joint Secretary at the Ministry of Power, Government of India, Vishal Kapoor took charge as the new Chief Executive Officer (CEO) of state-owned Energy Efficiency Services Ltd.

November 02, 2022. By Manu Tayal

Monthly Highlights

EESL India @EESL_India · 3m

The bright & enthusiastic group of students agreed that #ElectricVehicles can significantly benefit the environment as an eco-friendly alternative to fuel-powered car & can help #India achieve its #NetZeroCarbon emission target for 2070.

EESL India @EESL_India · Nov 25

We're honoured to receive the @nasscom Enterprise Cloud Adoption Award 2022 under the category of 'Leveraging Cloud For Operations - Government'. This is a testament to our relentless pursuit of excellence in providing strong IT support to the employees. @MinOfPower @power_pib

EESL India @EESL_India · Nov 11

He also demonstrated the best practices on Environment, Health & Safety and Social (EHSS), which make Streetlighting National Programme a nationwide success
@MinOfPower @OfficeOfRKSingh @power_pib @power_pib @iimlchandra

EESL India @EESL_India · 5h

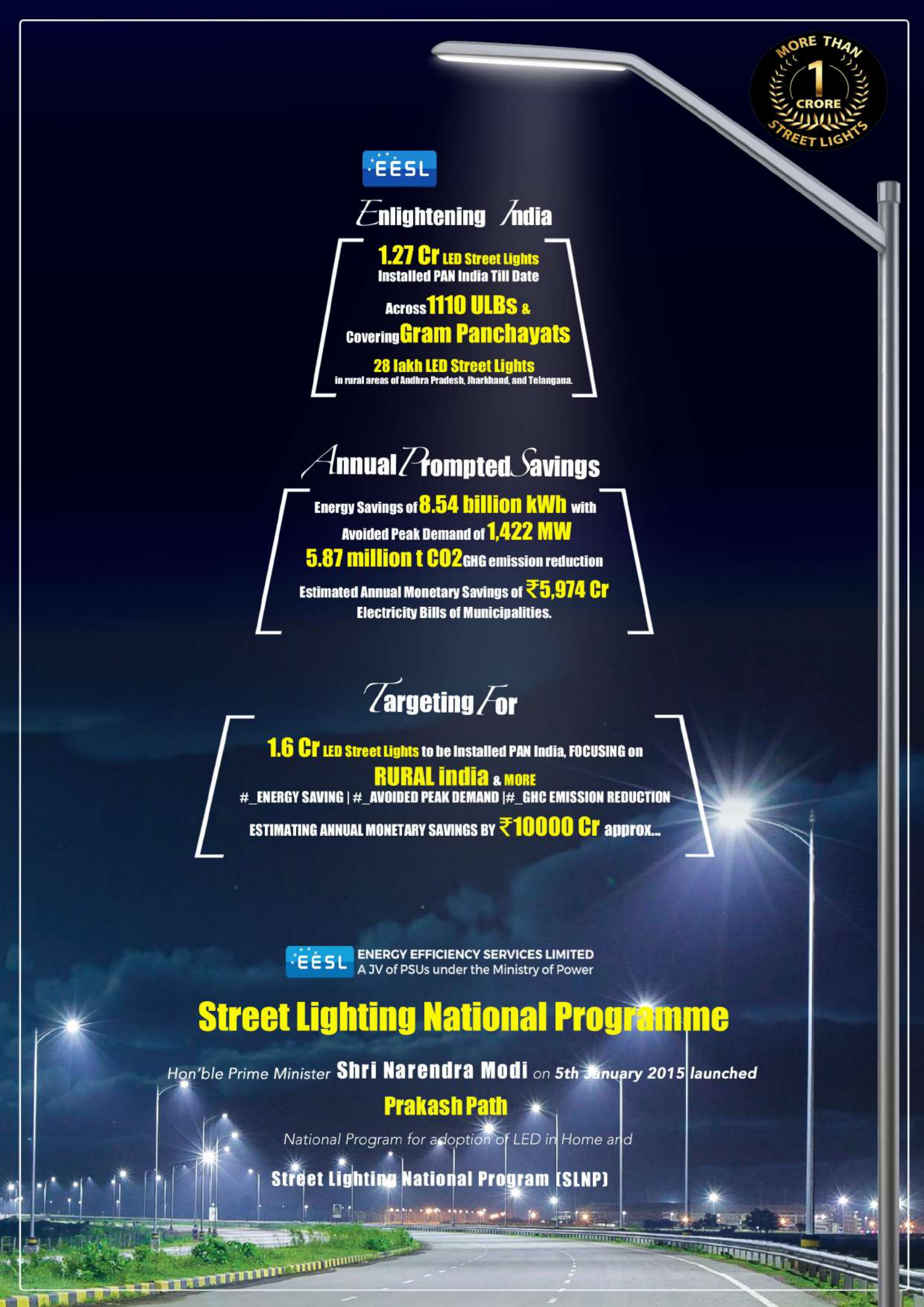
We organised the 2nd edition of the 'Awareness Session on #renewableenergy & #energyefficient Technologies' at St. Thomas' Girls Senior Secondary School in New Delhi. The session witnessed an in-depth presentation on the benefits of #ElectricVehicles by the @Tatamotorsev team.

EESL India @EESL_India · Nov 14

We organized an insightful awareness session on benefits of #energyefficiency for students of @FoundationAzad in #Delhi. Our team deliberated on many ways we can integrate energy efficiency in our lifestyle & how it can help in mitigating #climatechange @MinOfPower @power_pib

EESL India @EESL_India · Nov 5

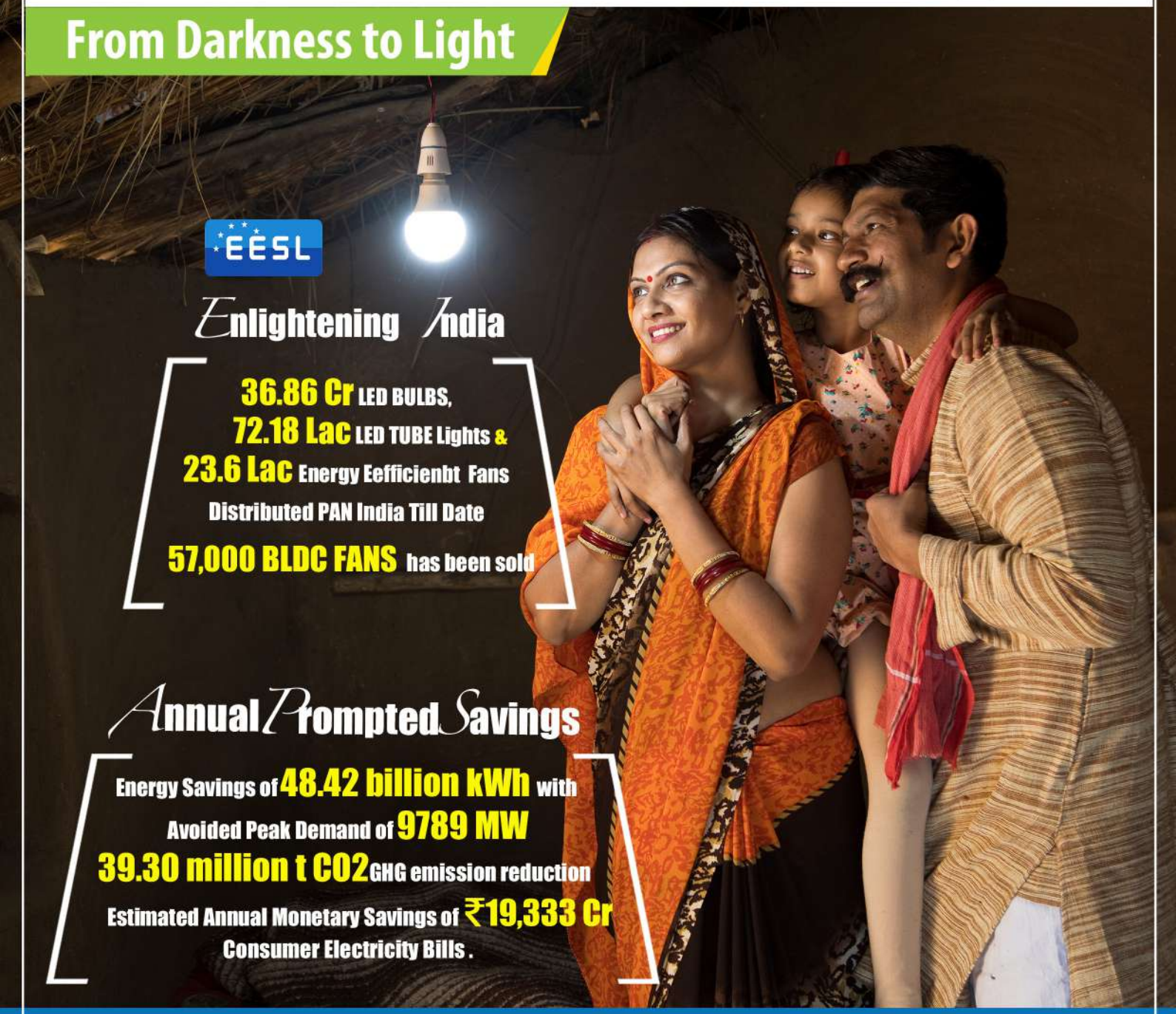
Our Head of Operations, Mr. @AnilKum86816585 addressed the inaugural session at the 'Digital LED: The Future of Lighting', a conference hosted by ELCOMA India. Further, he shared his insights on the company's vision for deploying #smart streetlights in the country. @MinOfPower


MORE THAN
1
CRORE
STREET LIGHTS
EESL
Enlightening India
1.27 Cr LED Street Lights
Installed PAN India Till Date
Across 1110 ULBs &
Covering Gram Panchayats
28 lakh LED Street Lights
in rural areas of Andhra Pradesh, Jharkhand, and Telangana.
Annual Prompted Savings
Energy Savings of 8.54 billion kWh with
Avoided Peak Demand of 1,422 MW
5.87 million t CO2 GHG emission reduction
Estimated Annual Monetary Savings of ₹5,974 Cr
Electricity Bills of Municipalities.
Targeting For
1.6 Cr LED Street Lights to be Installed PAN India, FOCUSING on
RURAL india & MORE
#_ENERGY SAVING | #_AVOIDED PEAK DEMAND |#_GHC EMISSION REDUCTION
ESTIMATING ANNUAL MONETARY SAVINGS BY ₹10000 Cr approx...
EESL
ENERGY EFFICIENCY SERVICES LIMITED
A JV of PSUs under the Ministry of Power
Street Lighting National Programme
Hon'ble Prime Minister Shri Narendra Modi on 5th January 2015 launched
Prakash Path
National Program for adoption of LED in Home and
Street Lighting National Program (SLNP)

GOVERNMENT OF INDIA
MINISTRY OF POWER

UJALA
Unnat Jyoti by Affordable LEDs for All

From Darkness to Light



EESL

Enlightening India

36.86 Cr LED BULBS,
72.18 Lac LED TUBE Lights &
23.6 Lac Energy Eefficienbt Fans
Distributed PAN India Till Date

57,000 BLDC FANS has been sold

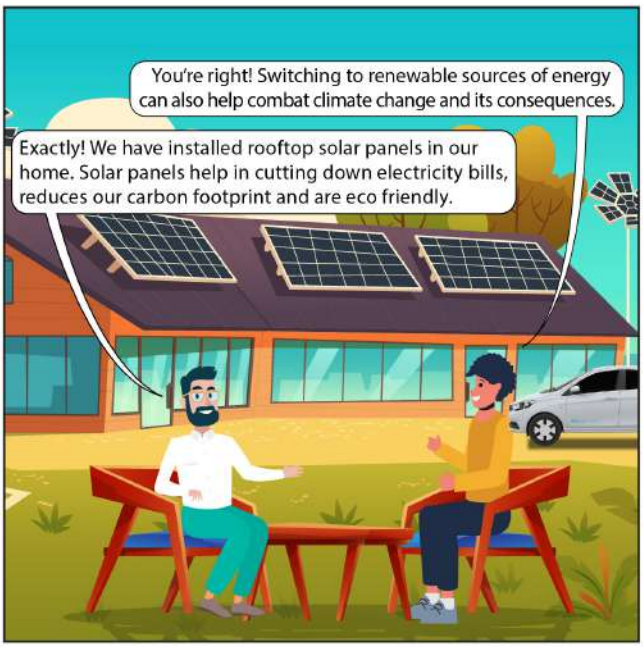
Annual Prompted Savings

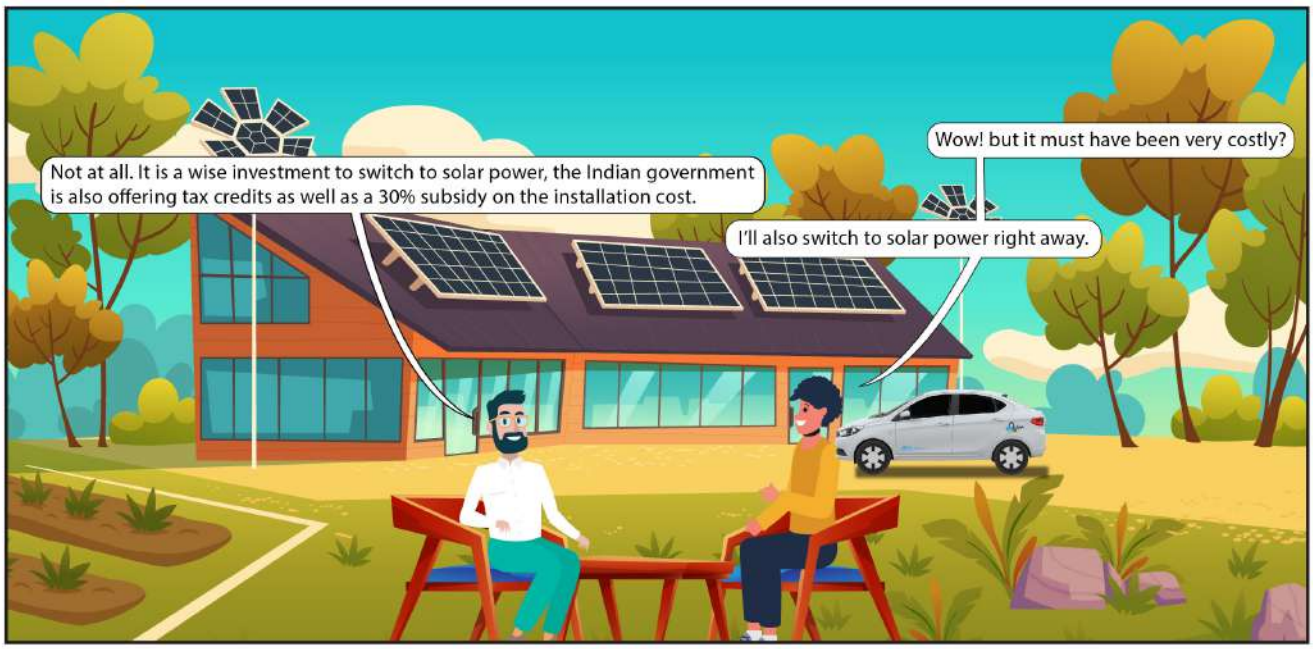
Energy Savings of **48.42 billion kWh** with
Avoided Peak Demand of **9789 MW**
39.30 million t CO2 GHG emission reduction
Estimated Annual Monetary Savings of **₹19,333 Cr**
Consumer Electricity Bills.

UJALA scheme was also included in the seven schemes that were selected for the Gram Swaraj Abhiyan (GSA) and Extended Gram Swaraj Abhiyan (GSA) of GoI. EESL distributed over 68 lakh LED bulbs covering over 65,000 villages across India under GSA and EGSA. The distribution of LED bulbs and awareness creation among low income households under this campaign was done through distribution counters and mobile vans in the villages.

The country needed something that consumed less electricity, was brighter and less costly. This need gave birth to thve UJALA scheme. Necessary steps were taken to promote LED manufacturing. Policies were changed. This reduced the price of the bulb and once people experienced its benefits, the demand also increased. The UJALA Scheme has completed 5 years yesterday itself. It is a matter of immense satisfaction for all of us that more than 36 crore LED bulbs have been distributed throughout the country.

- Prime Minister Narendra Modi, 6th January 2020





DECENTRALIZED SOLAR PROGRAMME

Considering India's huge solar capacity and need to have access clean, reliable and cheap electricity, EESL's Solar Programme offers uniquely designed solar PV based solution for the DISCOM, Government, Industry, Institutions, retail etc. consumers by means of establishing solar PV based power projects.

For more information, please contact us:

Energy Efficiency Services Limited (EESL)

5th, 6th & 7th Floor, Core -III, Scope Complex,
7 - Lodhi Road, New Delhi - 110003

Phone: 011-45801260
Website: www.eeslindia.org

/EESLIndia @EESL_India Energy Efficiency Services Limited /Company/indiaeesl