



# **GLORIOUS PAST, INSPIRING FUTURE**



The journey continues



The Konark Sun Temple, a thirteenth-century Sun Temple (also known as the Black Pagoda), built-in Orissa red sandstone (Khandolite) and black granite by King Narasimhadeva I (AD 1236-1264) of the Ganga dynasty. The Sun Temple was constructed towards the end of Odisha's temple-building phase in the 13th century by King Narasimha Deva I of the Eastern Ganga Dynasty (whose great grandfather renovated the Jagannath Temple in Puri). Dedicated to Surya the Sun God, it was made as his colossal cosmic chariot with 12 pairs of wheels pulled by seven horses (sadly, only one of the horses remains).



# ॐ! विश्वानि देव सवितर्दुरितानि परासुव! यद् भद्रंतन्न आ सुव!!

Om. O God, the creator of the universe and the Giver of all happiness.

Keep us far from bad habits, bad deeds, and calamities.

May we attain everything that is auspicious.



The Sun is the source of infinite energy. India has since time immemorial, celebrated the enormous power of "Surya" as a benevolent benefactor and a supreme nurturer.

REC's logo is a tribute to the all-powerful Sun and its aspirations to tap the possibilities as endless as the Sun's energy, as reflected in the tagline "Endless Energy, Infinite Possibilities".







Shri R. K. Singh

Minister of State (IC) for
Power and
New & Renewable Energy
Minister of State for Skill
Development
and Entrepreneurship

I am happy to know that REC Limited (RECL) is bringing out a publication celebrating 51 years of its service to the nation.

REC Limited, since its inception in 1969, has been at the forefront of the electrification drive as the nodal agency for Ministry of Power's rural electrification programs. From financing energization of pump sets to becoming one of the leading infrastructure finance companies, REC has created a strong legacy and a rich history by pioneering commendable initiatives towards the development of the power sector in our country. Its contribution to the movement of universal household electrification is specially mention worthy.

I extend my best wishes and sincere appreciation to REC Limited and its employees. I am sure it will continue to play an important role in powering the infrastructure sector of the country and realising the dreams of millions of our fellow countrymen.

R. K. Singh







**Shri Sanjiv N. Sahai**Secretary, Ministry of Power Govt. of India

I am happy to know that REC Limited (Formerly Rural Electrification Corporation Limited), a Navratna CPSE under the Ministry of Power, on the occasion of its 51st Foundation Day, is publishing its first Coffee Table Book, pictorially highlighting its rich heritage and culture, achievements and accomplishments since its inception in 1969.

Over the years, REC Limited has played a key role in various programmes and initiatives of the Government. The success of Green Revolution and Saubhagya is in no small measure due to REC Limited and its employees. I am sure, the publication would be useful in documenting the work culture, achievements, and accomplishments made by REC in its journey of five decades.

I extend my warm greetings and congratulations to all the employees of REC Limited on its 51st Foundation Day.

Sanjiv Nandan Sahai





**Shri Sanjeev Kumar Gupta**Chairman & Managing Director and Director (Technical)
REC Limited

On the remarkable feat of over five decades of service to the nation, I first and foremost convey heartiest congratulations to the entire team of REC Limited. It is due to the incessant efforts of the team that since inception, our growth trajectory has been robust and remarkably stable.

I would like to thank the Ministry of Power, Government of India for putting their trust in us and giving us the opportunity to illuminate the aspirations of millions of lives, through their flagship electrification schemes like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya).

REC owes its stupendous success also to its other stakeholders - our clients, our partners, our shareholders, and the community which allows us to thrive and grow.

REC has been tirelessly working towards streamlining and strengthening the power sector landscape of the nation through its financial assistance and technical expertise. This special publication encapsulates our glorious past spanning over fifty years and shall remain an inspiration for the future generation. As India marches towards a USD 5 trillion economy, REC is poised to play an important role in making us an economic superpower.

I congratulate the team putting in a great effort of bringing out this special publication and wish everyone at REC Limited an energised future!

Sanjeev Kumar Gupta





**Shri Ajoy Choudhury**Director (Finance)
RFC Limited

# 50 Years and Counting

This coffee table book is not just an account of the journey of a company, but a chronicle of the transformation of a Nation, billion people strong. As we celebrate our Golden Jubilee, it is time to relive those numerous moments that led to the creation of the robust foundation on which REC stands tall today. It is not only a moment to reminisce, but also a time to march together ahead with the aim to fulfil the Nation's goal of sustainability and development.

Since its establishment in 1969, REC has been instrumental in achieving historical milestones, be it making the green revolution a success right at its inception, or playing a pivotal role in electrifying every household in the country under Saubhagya. This coffee table book maps the entire journey of REC from its inception till date and archives all the milestones achieved over the years.

The entire journey is documented through the concept of "Panch Tattva" (Five elements), where Prithvi (Earth), Jal (Water), Agni (Fire), Vayu (Air), and Aakash (Sky) - the essential elements of nature, makes for the theme of the narrative. We hope the readers find this publication captivating and that there are enough takeaways from this concerted effort.

In the end, I would like to congratulate my entire team and hope in the coming years we build further upon the reputation and glory that has been forged with a lot of hard work and forethought.

Ajoy Choudhury

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# Chronicle of Electricity The India Story

India's power sector is at the cusp of transformational change due to progressive measures taken by the government to optimise power generation and upgrade distribution.

Electricity is the backbone of all economic activity. India has been the third largest producer and third largest consumer of electricity in the world with installed power capacity reaching 370.49 gigawatts (GW) as of May 2020. Electricity production reached 1,252.61 billion units (BU) in FY20<sup>[1]</sup>.

The power generation segment includes thermal, hydro, nuclear and renewable energy. Keeping in line with the goal of sustainable development and India's commitment to the Paris Agreement on climate change, India's power generation mix is rapidly shifting towards a greater share of renewable energy sources.

The Government of India has released its roadmap to achieve 175 GW capacity in renewable energy by 2022<sup>[2]</sup>, which includes 100 GW of solar power and 60 GW of wind power. It is expected that by the year 2040, around 49% of total electricity will be generated by renewable energy which will effectively save India ₹ 54,000 crore (US\$ 8.43 billion) annually.

This section seeks to encapsulate the history of India's power sector, starting from the first installation of electric street lights in late 1800s to 100% village electrification today.



Electric tram service, Madras (now Chennai), 1895[3]



Calcutta (Now Kolkata), 1879<sup>[4]</sup>

### 1879

In 1879, PW Fluery & Co. used light bulbs to demonstrate electricity on the streets of Calcutta (now Kolkata).

### 1889

Kilburn and Co., which later became Calcutta Electricity Supply Co., electrified Harrison Road (renamed MG Road) in Kolkata. This was the first street in India to have electric light bulbs.

### 1895

The first electric tram service in India was started in Madras (now Chennai) in 1895

Asia's First Hydro Power Station, Sidrapong Hydroelectric Power Station in Darjeeling was set up with a capacity of 130 kW to supply power to the Darjeeling tea plantations<sup>[5]</sup>.

### 1899

Emambagh Power Station was commissioned by the Calcutta Electricity Supply Co. to supply commercial loads in and around Calcutta. It provided power to its consumers with less than 1 Mega Watt (MW) demand. The capacity of the boilers was 500 hp with the provision to increase upto 800 hp.

### 1902

Sivasamudram Power Station, Asia's first large hydro power station designed to promote industrial development was commissioned under the Cauvery Power Scheme by the Mysore government to supply power to gold mines. It also supplied power to Bangalore, a part of Madras Presidency. Its initial capacity was 7.92MW which grew to 47MW by 1938.

### 1905

Bengaluru became the first city in Asia to be lit up by electric streetlights, when the city got nearly 100 of them installed at prominent locations.

### 1910

The Electricity Act of India was framed which allowed private companies to generate and supply electricity. Most of the early power stations in India were owned and operated by private companies.

### 1920

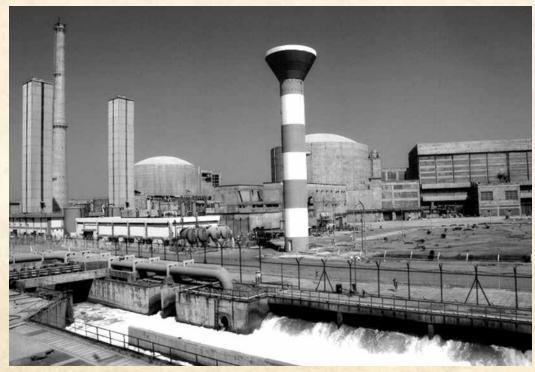
One of the major thermal power stations in the British era, Hussain Sagar Thermal Power Station was set up in Hyderabad by the Nizam, Mir Osman Ali Khan.



Electric streetlights in Bangalore (now Bengaluru), 1905[6]



The first electric train, Bombay (Now Mumbai), 1925[7]



Tarapur Atomic Power Station, Tarapur, Maharashtra[8]

The first electric train in the country ran on the Harbour Line between Bombay's Victoria Terminus and Kurla on 3 February 1925. The section was electrified on 1500V DC.

### 1948

The evolution of the power sector in India began in 1948, when the Electricity Supply Act was passed. This marked the beginning of functioning of State Electricity Boards (SEBs).

Construction of the Bhakra-Nangal dam, one of the highest gravity dams in the world and one of the earliest river valley development schemes undertaken after the independence of India, was started.

### 1951

Central Electricity Authority (CEA) was constituted under Electricity Supply Act, 1948 with the objective to develop efficient, economic, safe, reliable and self reliant power sector in the country.

### 1964

The first nuclear reactor facility was commissioned to be set up at Tarapur, Maharashtra in October 1964. It was to have two Boiling-Water Reactor (BWR) units with a capacity of 160MW each. It was completed in 1969. The units attained criticality in February 1969 and it began generating power for commercial use in October 1969. The Tarapur Reactor was the only facility that used BWR.

### 1969

REC - The Rural Electrification Corporation (REC) was set up in 1969 after the famines of the 1960s with a mission to facilitate availability of electricity for agricultural pump-sets to accelerate growth and enrich the quality of life of rural and semi-urban population.

### 1976

The Electricity Supply Act was amended in 1976 leading to the establishment of NTPC (National Thermal Power Corporation), NHPC (National Hydro-Electric Power Corporation), and NPCIL (Nuclear Power Corporation of India Limited).

Commission for Additional Sources of Energy in the Department of Science & Technology was established in 1981. The Commission was charged with the responsibility of formulating policies and programmes for development of new and renewable energy apart from coordinating and intensifying R&D in the sector.

### 1989

Power Grid Corporation of India Limited (formerly National Power Transmission Corporation) was incorporated in 1989 by the Government of India to plan, promote and build integrated an efficient power transmission system network in country.

### 1998

Independent Regulatory bodies both at the Central level and at the State level viz. The Central Electricity Regulatory Commission (CERC) and the State Electricity Regulatory Commission (SERCs) were setup.

### 2010

Timarpur Okhla Municipal Solid Waste Management project, the first commercial waste-to-energy facility in India was set up in 2010 with the aim to convert one-third of the Delhi garbage into the much-needed electricity, enough to serve 6 lakh homes.



International Solar Alliance (ISA) is spearheaded by Hon'ble Prime Minister of India Shri Narendra Modi for efficient exploitation of solar energy to reduce dependence on fossil fuels<sup>[9]</sup>.

### 2015

In November 2015, the Hon'ble Prime Minister of India Shri Narendra Modi proposed the formation of the International Solar Alliance (ISA) which is an alliance of more than 122 countries most of them being sunshine countries, which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn.

### 2017

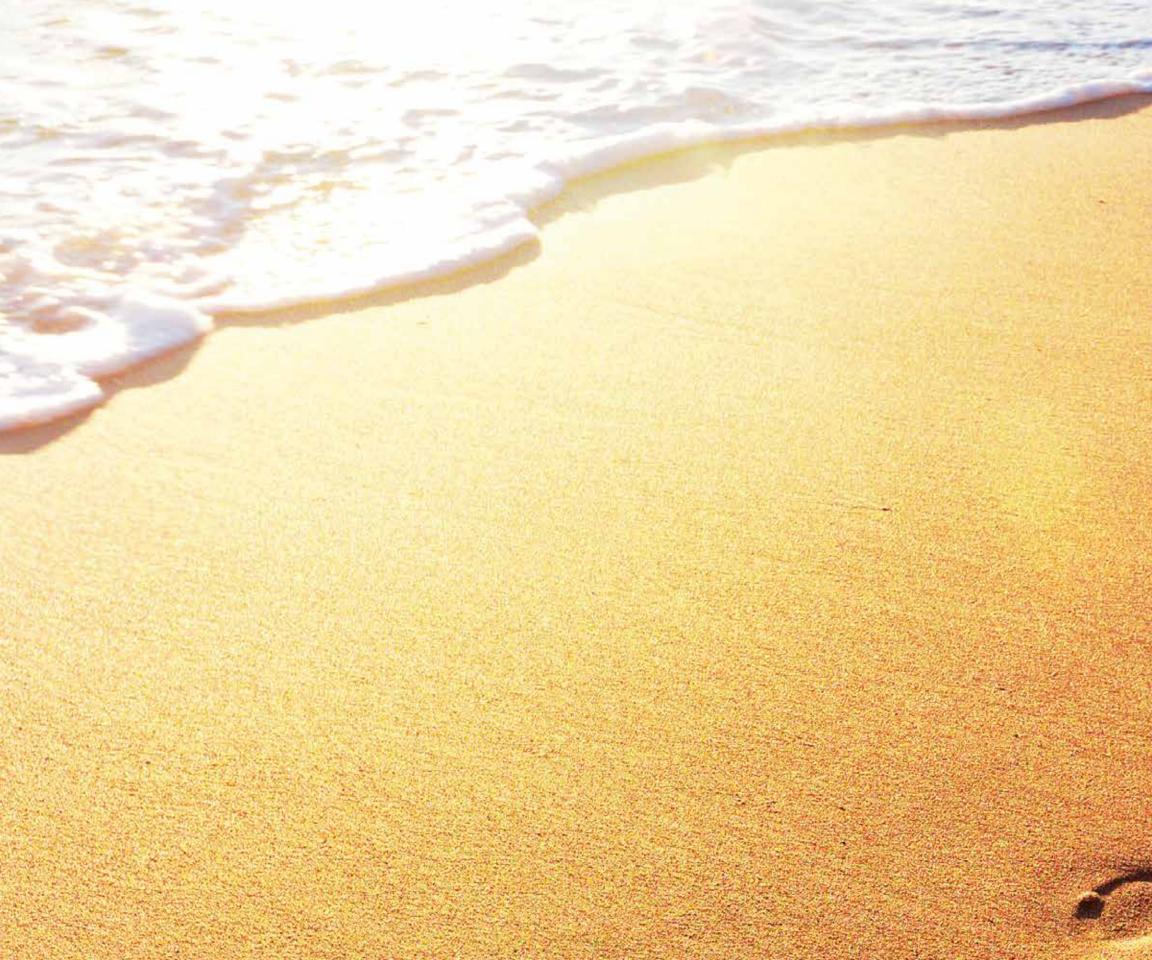
On March 29, 2017, the Central Electricity Authority (CEA) stated that for the first time India has become a net exporter of electricity. India exported 5,798 GWh to neighbouring countries, against a total import of 5,585 GWh.

### 2018

On 28th April, 2018, with electrification of Leisang village, Manipur, India achieved the feat of providing access to electricity infrastructure to all census villages in the country.

### 2019

On 31st March 2019, India achieved universal electrification with more 2.63 crore willing households electrified in a span of 18 months.







REC Limited (then Rural Electrification Corporation Limited) was established as an autonomous body under the Ministry of Irrigation and Power on July 25, 1969. The main objectives of the corporation were:

- To finance rural electrification schemes in the country
- To subscribe to special rural electrification bonds issued by the State Electricity Board.
- To promote and finance rural electric cooperatives in the country.
- To administer the funds received from time to time from the Government of India and other sources as grants or otherwise for the purpose of financing rural electrification in the country in general.

# 1974

The Corporation opened its first regional office in Kolkata



For the first time the corporation went to the market and issued bonds. The issue was extremely well received and was oversubscribed as soon as it opened.

# 1979

The Central Institute for Rural Electrification (CIRE), now called REC Institute of Power Management and Training (RECIPMT), was set up at Hyderabad to train Power Sector Personnel.

# 1990

REC ventured into financing of small/mini/micro hydel generation projects and gas turbine generation units in order to meet the growing demand and requirement of far-flung and remote villages through decentralised sources of power supply.

# 1992

The Government of India declared REC a "Public Financial Institution".



Shri R. K. Sinha, Former Chairman of REC (left) and Shri R. Vasudevan, Former Secretary, Ministry of Power (right) signing MoU on 30th August, 1993 at New Delhi

REC for the first time entered into a Memorandum of Understanding with Ministry of Power, laying down therein the expectations from the corporation in areas of financial and physical performance.

# 1997

REC was declared a Mini-Ratna (Category-I) company. On being made a Miniratna, REC could then enter into joint ventures and establish subsidiary companies.

# 1998

The RBI granted REC the certificate of Registration to carry on business of Non Banking Financial Company (NBFC).

# 2001

REC was the first Central Public Sector Undertaking to raise resources through securitised future receivables, and that too at a premium.



Former Chairman & Managing Director Shri P. Uma Shankar (right) ringing the opening bell at the National Stock Exchange (NSE) during the listing ceremony of the public issue of REC in 2008

REC's mandate expanded to include all types of generation projects without any limit on the size of the projects. Since then, REC has captured both state sector as well as private sector market.

# 2007

The seed was sown for the new state-of-the-art Headquarters at Gurugram, Haryana. The design was selected through an international competition. It is a Bioclimatic building being built on an urban site of 4.2 acres.

Two subsidiaries-REC-TPCL and REC-PDCL were also established.

# 2008

REC went for its Initial Public Offer, which received a phenomenal response and was oversubscribed nearly 27 times.

REC was also conferred "Nauratna" Status by the Government of India.

# 2009

The ERP system was put into operation covering all important business areas of the company. It captures the flow of data and information at the point of origin across all offices of the company based on a defined workflow hierarchy.





REC made Follow-on Public Offering (FPO) which got a phenomenal response and it was oversubscribed.

The RBI further categorized REC Limited as an Infrastructure Finance Company (IFC).

REC, along with NTPC, PGCIL & PFC formed a Joint Venture 'Energy Efficiency Services Limited (EESL)' to take up Energy Conservation projects.

# 2017

REC launched its maiden USD Green Bonds to become the first Indian PSU to launch Green Bonds denominated in US Dollars and raised USD 450 million for a tenure of ten years from the offshore market. The bonds were listed on the London Stock Exchange and Singapore Stock Exchange.

# 2018

To reflect its evolved and broader mandate and the current spectrum of business operations, Rural Electrification Corporation Limited officially changed its name to REC Limited in 2018.

# 2020

REC Limited successfully raised three year USD 500 Million Bonds, first USD cross border issuance out of India since COVID-19.

Bell ringing ceremony at the London Stock Exchange (LSE) during the launch of REC's maiden USD denominated Green Bonds, 2017





छिति जल पावक गगन समीरा। पंच रचित अति अधम सरीरा।।

Ramcharitmanas Chaupai | 1.4.11

In Vedic ideology, it is believed that the Pancha Maha-Bhoota or the five great elements are the basis of all cosmic creations. These elements are Prithui (Earth), Jal (Water), Agni (Fire), Vayu (Wind) and Aakash (Space). It is realized that not only our bodies are made up of these elements, but that our innate sense and the way we relate to everything around us, as human beings, has a base in these five elements.

Interestingly, the entire gamut of REC's existence has a correlation with these five elements. It offers financial and consultancy services covering thermal power, hydro power, wind energy and solar energy projects, which respectively tap the energy from Agni, Jal, Vayu and Aakash. Since its inception, REC has financed more than 1,12,000 MW of power. REC also energises the 'Prithvi' through its financial assistance to the Transmission and Distribution projects, that cover the length and breadth of the country to provide electricity to millions of people.

By mobilising the power of these tatuas, REC's past has been illustrious and the future is most certainly, glorious!



Thermal Power



Hydro Power



Wind Energy



Solar Energy



Transmission & Distribution







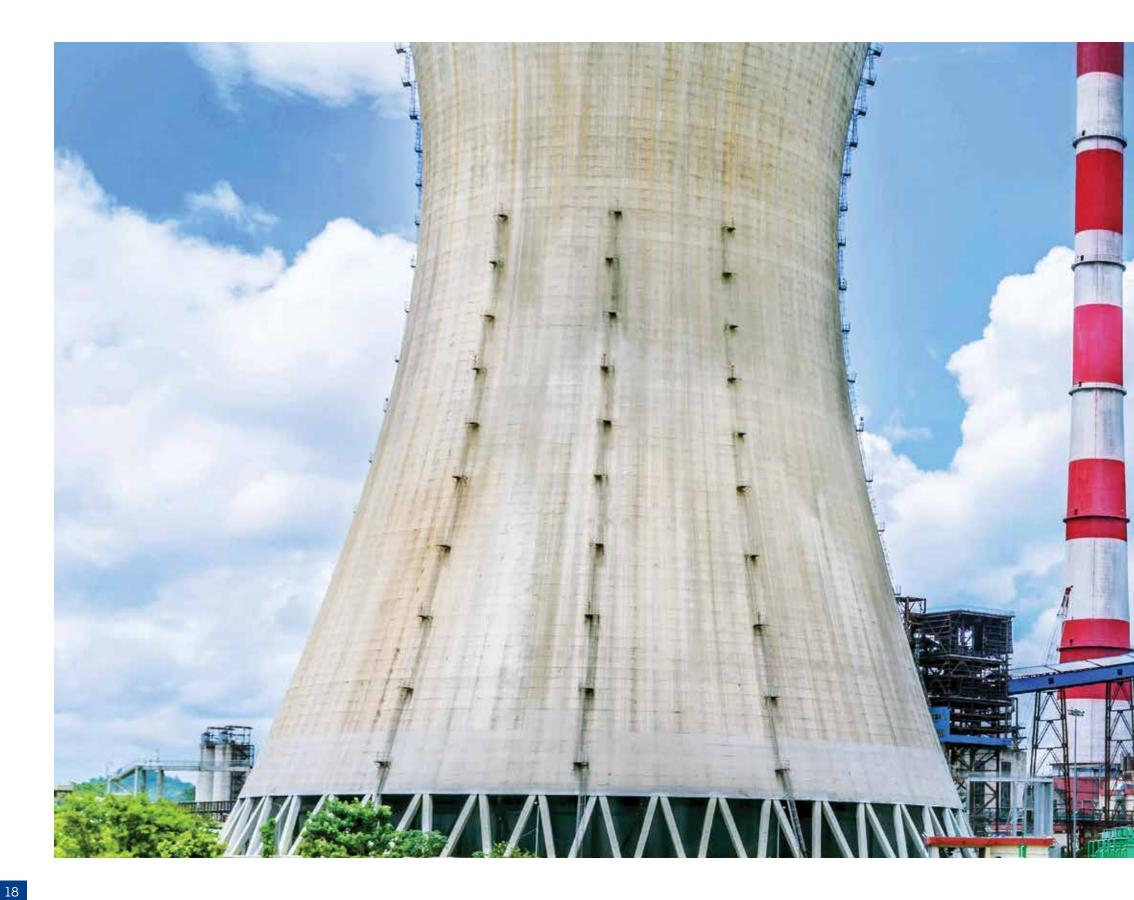
The element "Agni" is the driving force behind all life processes. It represents light and warmth. When channelized in the right manner, fire can generate power. At Thermal Power stations, heat energy is converted to electric power, thus tapping the potential of Agni. Coal and gas are the major sources of heat in a thermal power plant. Since India's demand for power, both domestic and industrial, is rapidly increasing and India has large coal reserves, thermal energy is a prerequisite for energy sufficiency.

Rapidly evolving technology is enabling thermal power plants to have more economic and energy efficient operations. Super-critical and ultrasupercritical technologies have further improved their efficiency. REC has financed some of India's biggest thermal power projects, employing various technologies, and covering the length and breadth of the country. REC funded projects span from 250 MW Santaldih Thermal Power Station in West Bengal to 3x660 MW super-critical thermal project in Koradi, Maharashtra; and from 1x500 MW Bokaro-A Thermal Power Station in Jharkhand to 1x600 MW North Chennai Thermal Power Station in Tamil Nadu.

In its spread, reach and impact REC's work resembles the strength of "Agni", fuelling the power sector with its relentless energy.

## REC funded 2x600 MW Singareni Thermal Power Plant in Telangana

2x600MW Singareni Thermal Power Plant is a coal-fired power station situated in Mancherial District, Telangana operated by the Singareni Collieries Company Ltd. REC had sanctioned a loan of ₹ 660 crore in February, 2016 towards implementation of the project in addition to existing loan from other lenders. The project is operational and has achieved a Plant Load Factor (PLF) of over 91% which is significantly higher than the All India Average.





### REC funded 600MW Stage II Kakatiya Thermal Power Station in Warangal district of Telangana

1x600MW Stage II Kakatiya Thermal Power Station is located in Warangal district of Telangana. REC had sanctioned term loan of ₹3,005 crore to Telangana State Power Generation Corporation Limited (TSGENCO) in May, 2008 for setting up the project. The power plant is operational with PLF of over 80% in FY2018-19. The 500MW Stage I of Kakatiya Thermal Power Station was also funded by REC.

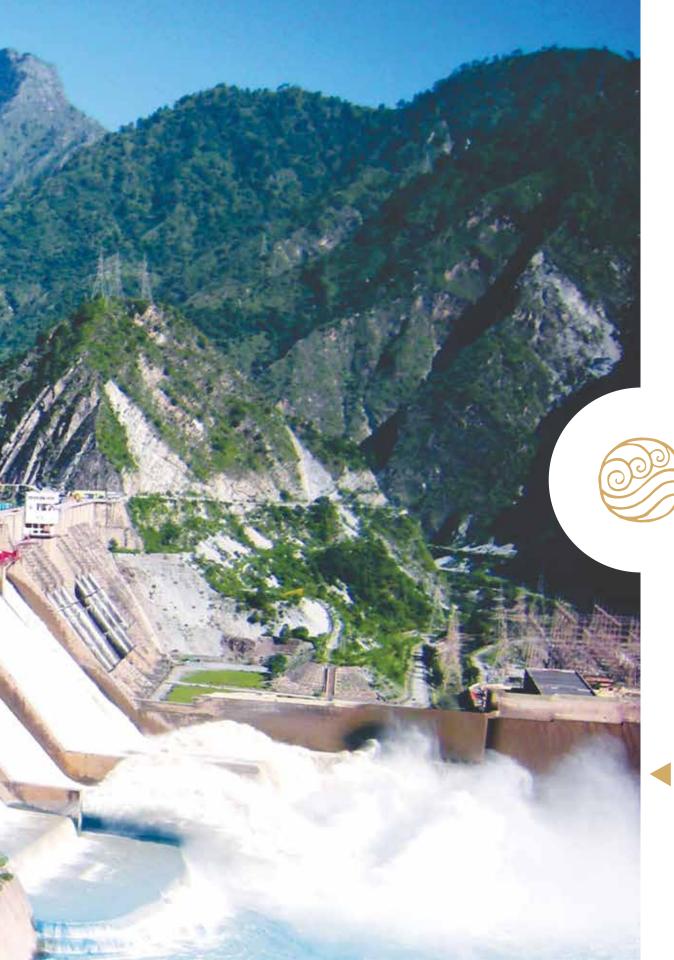


### REC funded 3x660 MW Super-critical Thermal Power Project in Koradi, Maharashtra

3x660MW Thermal Power Project is located at Koradi near Nagpur, Maharashtra. The power plant is one of the major power plants in Vidarbha region and is designed on Super Critical technology having superior efficiency. REC sanctioned ₹ 2,000 crore towards the project to Maharashtra State Power Generation Company Limited (MSPGCL) in July, 2016.







The element "Jal" or Water covers 70% of the Earth's surface. In its characteristics, water is associated with nurturing life forces around it, flowing in an effortless manner with the least resistance. With these attributes and abilities, this flow of water manifests itself into Hydro Power, which is poised to play a crucial role in India's sustainable development goals.

India is endowed with large water reserves that are estimated to be capable of meeting the demand of around 85 GW, making it the fifth in the world in terms of usable hydropower potential. Over the years, the Government of India has undertaken a number of policy and regulatory initiatives to promote hydropower development and facilitate investments in the sector. The New Hydro Power Policy introduced by the Government of India in 2008, which focuses on large hydro capacity additions, provides several liberal provisions for inducing large-scale private investments in the hydropower sector.

REC has been at the centre of the national drive for development of the country's hydro potential and has financed various state and private hydro projects over the years. These include the 12x80 MW APGENCO Polavaram Hydro Project in Andhra Pradesh, 3x150 MW Baglihar Hydro Project in Doda, Jammu and Kashmir and 4x250 MW Tehri Hydro Project in Uttarakhand.

REC, like "Jal", is a facilitator of nurturing growth in the country, creating new standards and benchmarks to be followed by others in the industry.

#### REC funded 3x150 MW Baglihar Hydroelectric Power Project in Doda District of Jammu & Kashmir

Baglihar Hydropower Project is located on the Chenab River in Jammu & Kashmir. REC had sanctioned term loan of ₹565 crore in March, 2004 to Jammu and Kashmir State Power Development Corporation Limited (JKSPDCL) towards development of the project. The project is currently operational.

#### REC funded 6x200 MW Teesta Hydropower Project in Sikkim

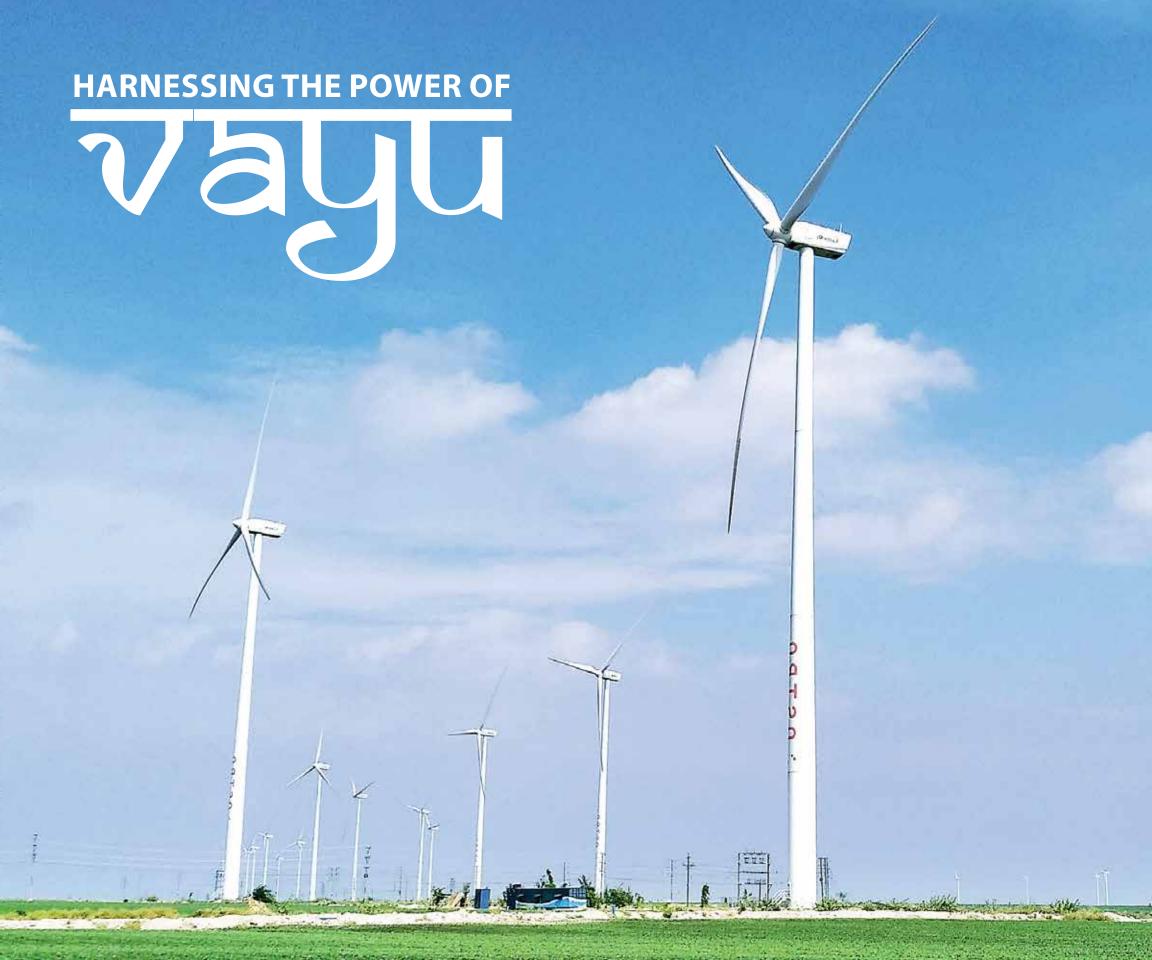
6x200MW Teesta Stage III located in the north-eastern state of Sikkim is one of the largest hydropower plants in India. REC is the lead lender of the project and had sanctioned term loan of  $\stackrel{?}{_{\sim}}$  5,239 crore in December 2006 to Teesta Urja Limited (TUL) towards development of the project. All the units of the project have been successfully commissioned.



#### REC funded 4x250 MW Tehri Hydroelectric Power Project in Uttarakhand

Tehri Hydroelectric project is situated on Tehri Dam which is the highest dam in India and one of the highest in the world. The project is located in Tehri Garhwal in Uttarakhand. REC had sanctioned term of ₹ 1,776 crore in October, 2015 to THDC Limited towards development of the project. The project is operational and operating satisfactorily.







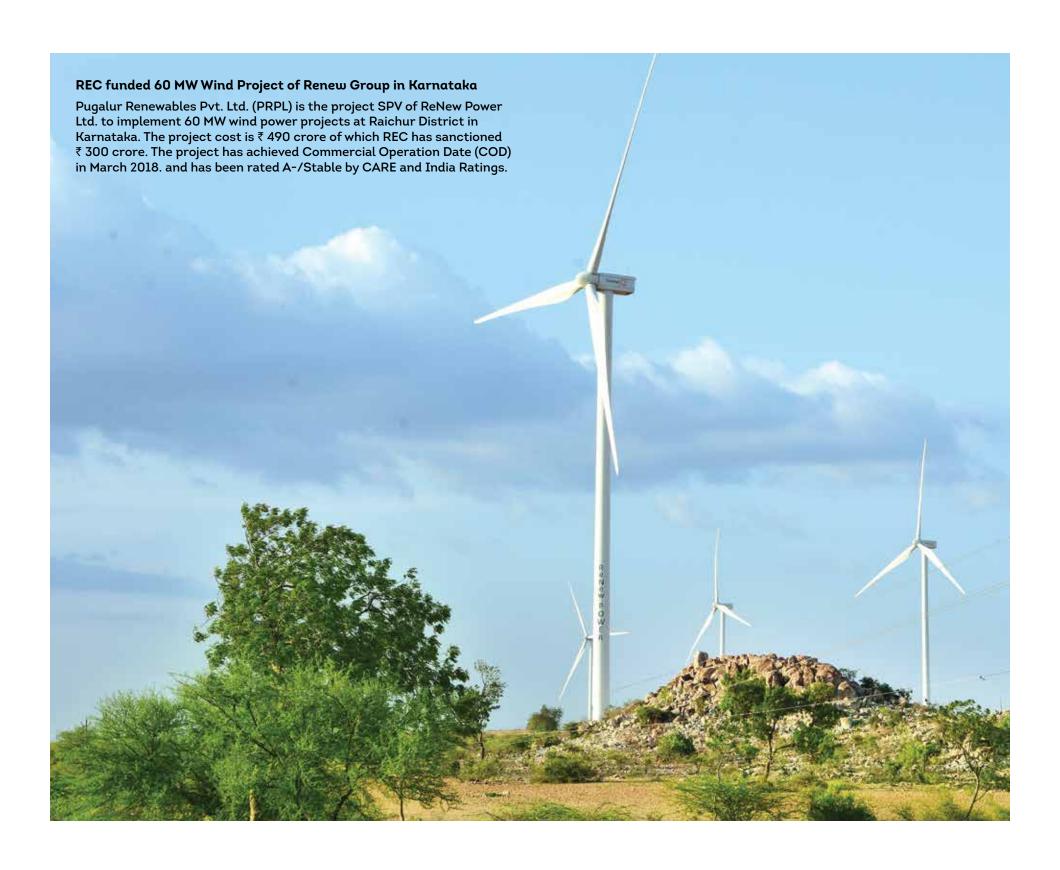
The element "Vayu" is the essence of life. Harnessing the movement of "Vayu" is indispensable for creating a sustainable future. India is blessed with constant movement of wind, especially in the states of Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Andhra Pradesh, Telangana, Tamil Nadu, Karnataka and Kerala.

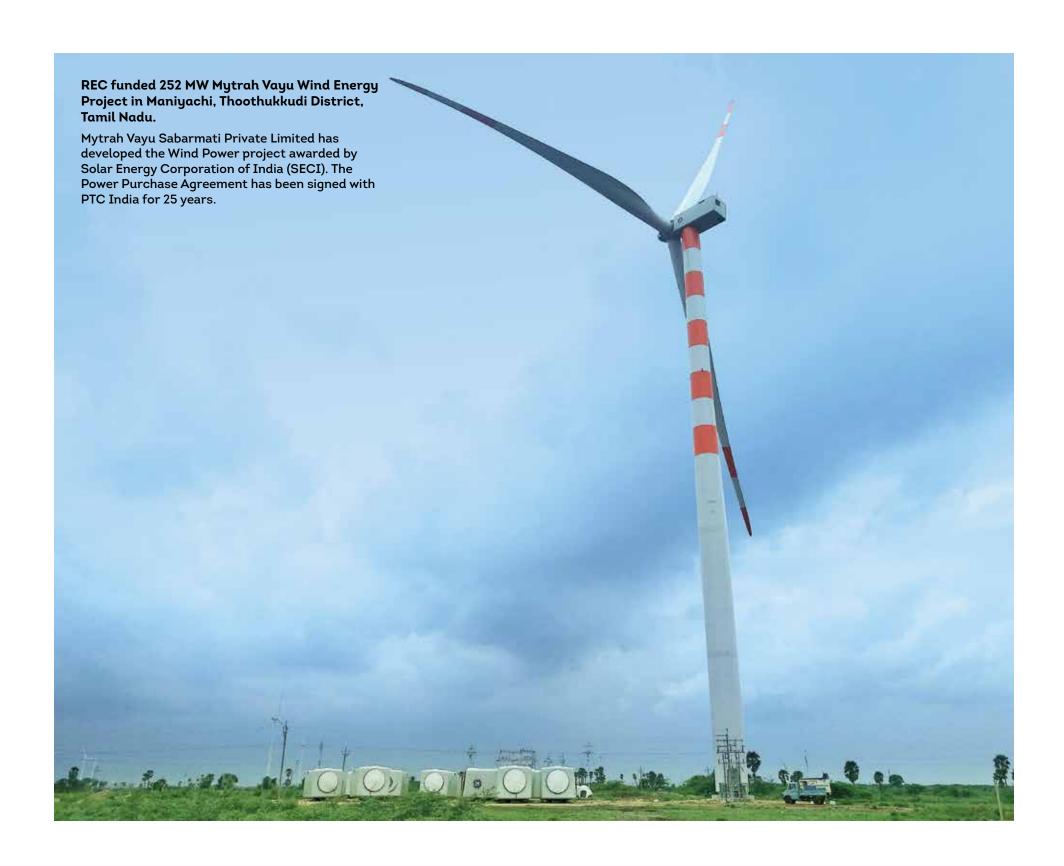
REC has been financing and promoting renewable energy projects from the early 2000s and has financed close to 5,000 MW of renewable energy since its inception. The company has financed wind energy projects in several states including Madhya Pradesh, Karnataka, Rajasthan and Gujarat. REC is poised to play a pivotal role in the achievement of greater share of renewable energy in India's power generation mix.

The life-giving air carries with itself, joy and happiness in the form of a pleasant breeze, moving the blades of windmills to create a sustainable future.

#### REC funded 100 MW Ostro Wind Project at Anantpur, Andhra Pradesh

The project is located in Uravakonda Tehsil, Anantapur district, which is approximately 170 km from Bangalore and was commissioned in December, 2016. It comprises of 50 Wind Turbine Generators of 2MW capacity with rotor diameter of 97 meters and hub height of 104 meters with a tubular truncated cone tower structure.









The element "Aakash" envelopes the entire Earth and all the living beings on it and none of the other four elements can exist without it. The sky is lit up with the energy of the Sun - the source of limitless energy. The plants and the trees survive, blossom and grow by absorbing the Sun's energy from the sky. Similarly, by captivating this energy into photovoltaic cells, the aspiration of a World powered by sustainable energy can be realised.

The Earth's surface receives 120,000 TW of solar irradiation, which represents 20,000 times more power than the whole planet needs<sup>[10]</sup>. About 5,000 trillion kWh per year energy is incident over India's land area with most parts receiving 4-7 kWh per sq.m per day.

Karnataka, Telangana, Rajasthan, AP, Tamil Nadu, Gujarat, MP and Maharashtra are the key states receiving high solar energy incidence.

India enjoys a mammoth solar energy potential and has spearheaded an alliance of more than 122 'Sunshine' countries, lying completely or partly between the Tropic of Cancer and Tropic of Capricorn. This alliance, known as the International Solar Alliance (ISA), aims at efficient utilisation of solar energy for reduced dependence on fossil fuels, thereby creating a greener planet.

REC, too is India's partner in the endeavour. Apart from being a corpus contributor to the ISA, REC has been financing solar power projects in various states. Moreover, REC's training institute RECIPMT has been empanelled by the National Institute of Solar Energy (NISE) as a partner training institute for conduct of Solar Training Programmes.

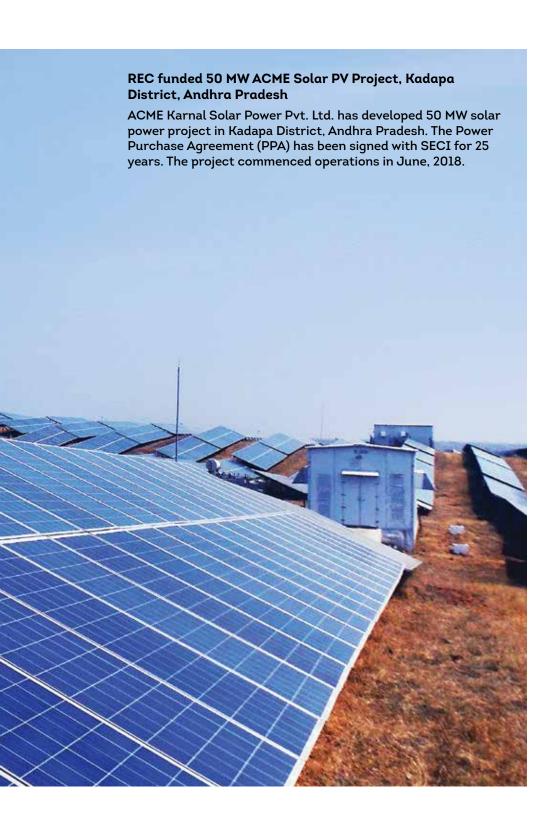
With its limitless energy, REC is like the ever-brilliant "Aakash" playing the role of the quintessential umbrella under which India's power sector continues to thrive.

#### REC financed 30 MW ACME Sunworld Solar Energy Project in Jagithyal Dirstrict of Telangana

Sunworld Solar Power Private Limited has developed solar power project under Telangana Solar Power Policy through competitive bidding. Developer entered into Power Purchase Agreement (PPA) with Northern Power Distribution Company of Telangana Limited. The duration of PPA will be 25 years at fixed tariff of ₹ 5.5949/kWh. The 30 MW project is located at Abbapur Village, Jagithyal District, Telangana. The project was commissioned in November, 2017.













"Prithvi" is the source of stability representing a structure that is reliable and dependable, just like the Transmission and Distribution lines spread across the length and breadth of the country. India has a unique topography, from mountains to plains, to plateaus, deserts, coasts and islands with a population of over a billion people. The natural resources for electricity generation in India are unevenly dispersed and concentrated in a few pockets and therefore, transmission and distribution (T&D) of electricity play an important role in the power delivery value chain and the overall power sector development of the country.

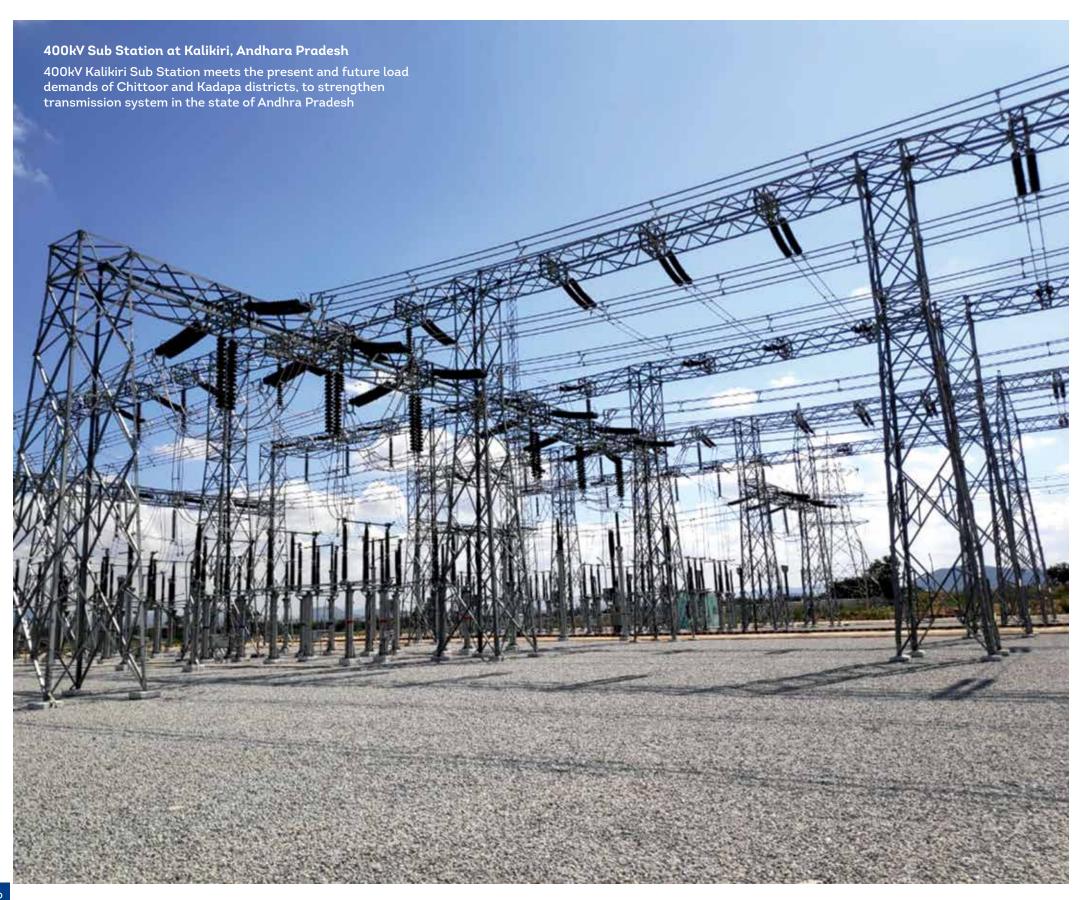
With growing penetration of electricity connections and increasing per-capita usage, the potential demand for electricity is boundless and with this increase in demand for power, new power generation capacity additions and expansion of transmission and distribution infrastructure have become major growth drivers for the sector. Given the scale of investment needs, the Government of India has roped in the private sector apart from contribution from the state and has necessitated the development of a dedicated Green energy evacuation corridor integrated with the existing grid.

REC has financed projects with a total transformation capacity of over 4,00,000 MVA. As a step towards value addition and diversification, REC has also established two subsidiaries in 2008, namely, REC Power Distribution Company Ltd. & REC Transmission Projects Company Limited, which specialise in providing technical, implemental and consultancy services to the T&D sector.

Like **"Prithvi"**, the growth of the power sector is contingent on development of a robust and a dependable transmission and distribution network.

#### REC funded 765kV Anpara Unnao Transmission Project, Uttar Pradesh

765kV Anpara Unnao transmission line evacuates the power from Anpara D Thermal Power Station located in Anpara, Uttar Pradesh. The transmission network meets the requirement of load growth in the state of Uttar Pradesh.





### **Illuminating India** Nodal Agency for the Saubhagya Scheme

REC, since its inception, has been the Government of India's partner in transforming the Indian power sector for improving the quality of life of Indians. REC has been the nodal agency for various schemes of the Ministry of Power, such as National Electricity Fund (NEF), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhayya), to name a few.

Energy access to all through last mile connectivity and electricity connections has remained the grand mission of the Government of India. Electrification of villages and households brings collateral benefits such as environmental up-gradation by replacement of kerosene; better education and health services; enhanced connectivity through radio, television and

mobile services; increased economic activities and improvement in the quality of life, especially for women.

Under the DDUGJY scheme, REC completed electrification of all villages in India on 28<sup>th</sup> April, 2018, with Leisang village in Manipur being the last village to be electrified. On 25<sup>th</sup> September, 2017, the Honourable Prime Minister Shri. Narendra Modi, had launched the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) scheme to ensure electrification of all households in the country. All willing households as on 31<sup>st</sup> March 2019, totalling to over 2.63 crore were electrified under the scheme.

REC continues this march together with the Government of India to provide sustainable and reliable power to all.



Hon'ble Prime Minister Shri Narendra Modi at the Red Fort, Delhi on August 15, 2015











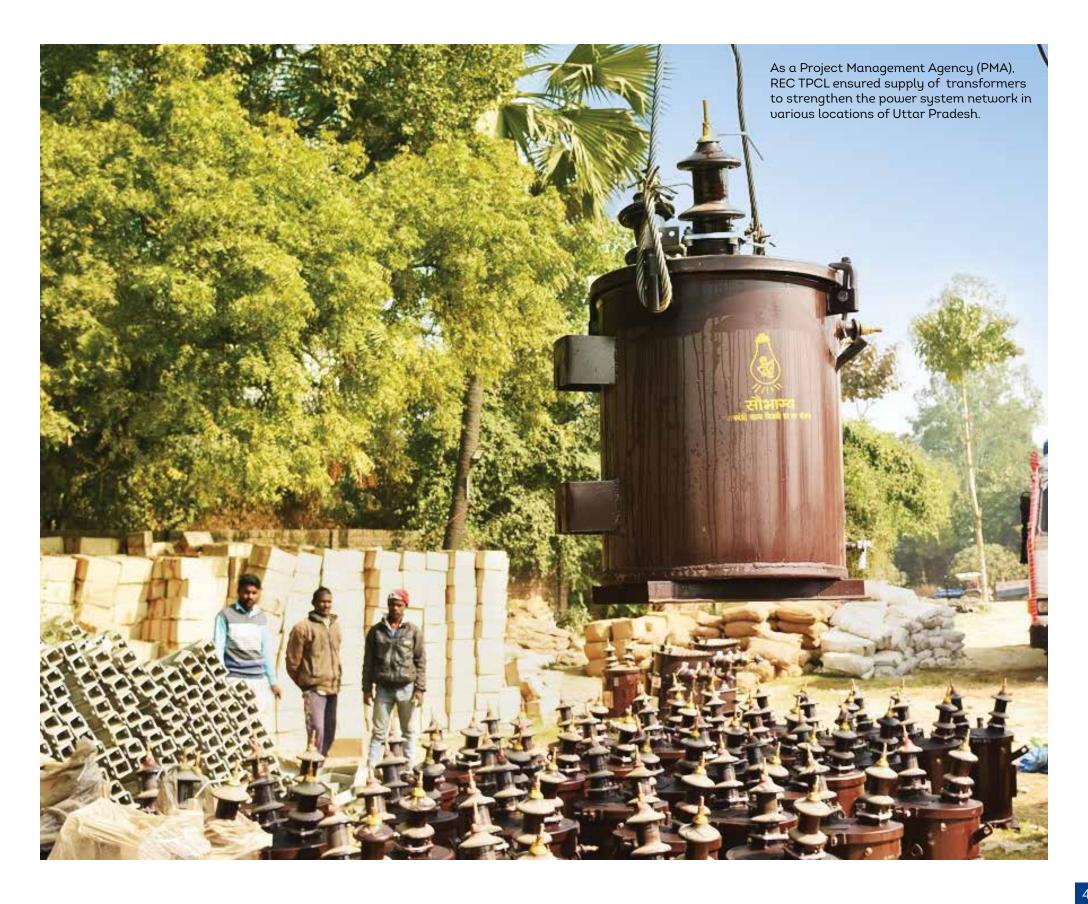
# Partners in Growth Our Subsidiary

REC Transmission Projects Company Limited (RECTPCL) is a wholly owned subsidiary of REC Limited (Formerly Rural Electrification Corporation Limited). The Ministry of Power has appointed RECTPCL as Bid Process Coordinator (BPC) for Inter State Transmission Systems across the country on Tariff Based Competitive Bidding route. RECTPCL commenced working as BPC in the year 2007 and was awarded its first transmission project in the FY 2010-11.

Besides acting as the Bid Process Coordinator, RECTPCL also provides consultancy services in Transmission and Distribution sectors for Project Management. Contract Management, Quality Control & Inspection and Project Execution.

The major projects include a Transmission App called 'TARANG' for Real Time Monitoring to track upcoming projects as well as progress of ongoing works in Indian Transmission Systems. The app facilitates effective monitoring of progress of under construction transmission systems in the country. The company also developed another app for Outage Management System named 'Urja Mitra' for disseminating power outages information to distribution consumers across India through SMS/e-mail/push notifications.





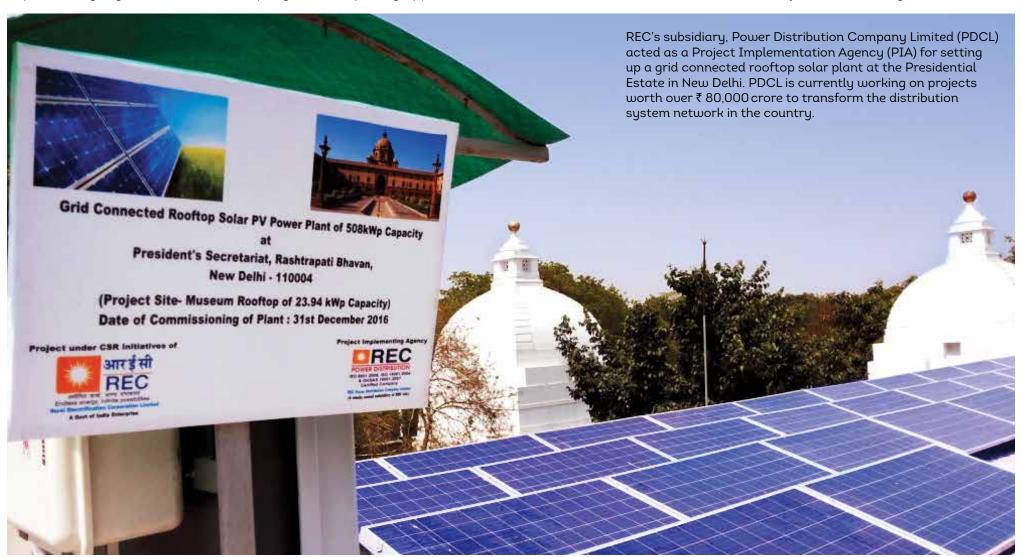
## Partners in Growth Our Subsidiary



REC Power Distribution Company Limited (REC PDCL), is a wholly owned subsidiary of REC Limited (Formerly Rural Electrification Corporation Limited) and received certificate of commencement of business on July 31st, 2007.

RECPDCL is rendering expert and value added consultancy services to power utilities across the country for AT & C Loss reduction, Smart Grid Projects implementation covering Smart Metering & SCADA, Real Time Data Acquisition System (RT-DAS) for feeders, Electrical Vehicle (EV) Charging, GIS Implementation, Solar PV Plants, Power Distribution Strengthening works and Energy Efficiency projects

Its major strengths include Pan India presence and use of technology to bring all stake holders on the same platform while being a perfect example of implementing e-governance. The company is also exploring opportunities in Asian & African countries for EPC and Project Consultancy works.





### Partners in Growth Our Joint-Venture



Energy Efficiency Services Limited (EESL) is a Super-Energy Service Company (ESCO), which enables consumers, industries, and governments to effectively manage their energy needs through energy-efficient technologies. Driven by the mission of 'Enabling More', it has been working diligently towards creating universal access to sustainable energy solutions to enable a low carbon future, with significant economic and social impact. EESL is promoted by the Ministry of Power, Government of India as a Joint Venture of four reputed public-sector undertakings - NTPC Limited, Power Finance Corporation Limited, REC Limited, and POWERGRID Corporation of India Limited.

EESL, since its inception in 2009, has been pivotal in championing the cause of energy efficiency in the nation. It is currently implementing the world's largest energy efficiency portfolio. EESL's successful large-scale deployment of energy-efficient solutions has been possible through its innovative business approach, which is creating mutually beneficial incentives for all stakeholders. EESL has rolled out pioneering initiatives in fields like energy efficient lighting, E-mobility and agriculture, helping enable an entire ecosystem.

EESL has been credited for igniting the LED revolution in the nation. This remarkable achievement has been possible through its focus on solution-driven innovation, with no subsidy or capital expenditure. The flexibility of the business model is unlocking demand in sectors where none existed.



An REC promoted company, Energy Efficiency Services Limited (EESL) launched the National E-Mobility Programme in India, inaugurated by the Hon'ble Minister Shri R K Singh. EESL has rolled out various initiatives in the field of energy efficiency such as lighting, e-mobility, agriculture among many others.



# Creating Tomorrow's Leaders REC Institute of Power Management & Training

In 1979, REC founded a national training institute in Hyderabad for the development of techno-managerial skill and efficiency in State Electricity Boards (SEBs), Distribution Companies, Rural Electric Cooperatives and other Power Utilities. It also conducted in-house training programmes for REC employees. It was then called 'Central Institute for Rural Electrification (CIRE)'.

The institute has been rechristened 'REC Institute of Power Management and Training' (RECIPMT) and continues to cater to the training and development needs of engineers and managers of the power sector. It has conducted numerous training programmes on Power Generation, Transmission, Distribution, Renewable Energy and other industry relevant subjects. Further, the National Institute of Solar Energy (NISE), an autonomous institute of the Ministry of New and Renewable Energy, GoI, has empanelled RECIPMT as the partner-training institute for conducting Solar Energy Programmes.

Its lush green and serene campus spans over 14.3 acres and has well-equipped classrooms, a modern conference hall, a High Voltage Distribution System (HVDS) demo facility, a yoga and fitness centre and a well managed executives' hostel. The entire campus is Wi-Fi enabled and is powered by 40 KW Grid Connected Rooftop Solar plant.

RECIPMT has been conducting capacity building programmes for power sector executives for over 40 years, making it the oldest power sector training institute. It has organized over 2,200 training programs and trained close to 48,000 personnel of National Utilities. It also provides customised training programmes for utilities, based on their specific requirements. The institute has played a key role in implementing Ministry of Power's capacity building initiative under DRUM, IPDS, DDUGJY and SAUBHAGYA. Under these schemes, it has trained close to 2.5 lakh C&D category employees. Further, it has organised 95 International Training Programmes under Indian Technical and Economic Cooperation (ITEC) of the Ministry of External Affairs, GoI, wherein more than 1,500 power sector executives from over 100 countries have been trained.

Through its over 40 years of working with power sector executives across the world, RECIPMT has become an expert in the Indian power sector. It consistently strives to benchmark international standards in power sector training and constantly endeavours to provide extensive education, exposure and facilities to its students by giving them the opportunity to learn and interact with the front runners in the sector.



REC IPMT campus at Hyderabad, Telangana



International students attending a training programme on Power Generation, Transmission, Distribution and Renewable Energy celebrated the Republic Day of India on the 26<sup>th</sup> of January, 2018 at the RECIPMT campus.





Over the past 50 years, REC has carved a niche in the society, not merely as a leader in providing financial assistance to the power sector, but also as a company whose success is measured by the positive impact it creates on the society and the people it connects with. As a responsible Corporate leader, REC has always been at the forefront when it comes to creating a positive impact through its strategic partnerships and associations.

REC strives to achieve a balance of economic, environmental and social imperatives while selecting projects to support. Its aim is to fund and support socially beneficial projects with sustainability as a guiding principle. The underlying concern is to reach a wide range of desired beneficiaries with a view to empower economically and socially backward communities. Many of these initiatives are in the areas of hygiene and sanitation, promotion of healthcare facilities, skill development, women empowerment, environmental sustainability and rural infrastructural development to build up an inclusive social fabric in the country.

REC, in partnership with Akshay Patra, serves wholesome mid-day meals to children in government run schools across the country, thereby providing them with nutritious food and reducing school drop-out rates.



REC in partnership with ATDC initiated a skill development training program for people from mixed socio-economic cultural backgrounds in Ludhiana, Punjab. The program was successful with over 75% of candidates' getting industry wage placement and many choosing the self-employment route.



REC joined hands with Barefoot College, Tilonia, Rajasthan to train women from rural communities into becoming 'solar energy engineers'





# The Visionaries Leaders who Inspire Us

REC has played a key role in facilitating, supporting, trouble shooting and capacity building across the power sector value-chain by financing and providing value-added services to the sector with the help of its subsidiaries, REC Power Distribution Company Limited (RECPDCL) and REC Transmission Projects Company Limited (RECTPCL); and the training institute, REC-Institute of Power Management and Training (REC-IPMT). All

this has been possible because of the guidance and vision provided by the REC leadership. It is only because of their hard work that the organization has achieved its major milestones. The stalwarts who have led us are a matter of immense pride for us, as their strength and zeal has percolated down the line to develop a unique culture at our work place which is distinct from the other organisations and makes us stand apart.



Shri Sanjeev Kumar Gupta 2020



Shri Ajeet Kumar Agarwal 2019-2020



Dr. P. V. Ramesh 2017-2019



Shri B. P. Pandey 2016-2017



Shri Rajeeu Sharma 2011-2016



Shri H. D. Khunteta 2011



Dr. J. M. Phatak 2010-2011



Shri P. Uma Shankar 2008-2010



Shri A. K. Lakhina 2005-2008



Shri M. N. Prasad 2004-2005



Shri Aruind Jadhau 2004



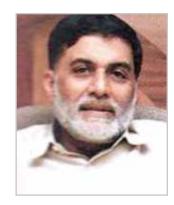
Shri A. N. Tiwari 2003-04



Smt. Uma Pillai 2002-2003



Shri Dhanendra Kumar 2002



Shri Diuakar Deu 1997-2002



Smt. Rathi Vinay Jha 1997



Shri M. Gopalakrishna 1995-1997



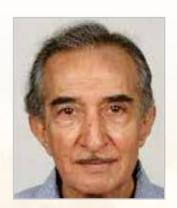
Shri R. K. Sinha 1993-1995



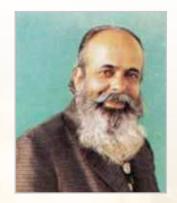
Shri Satish Khurana 1986-1993



Shri M. Venkataratnam 1983-1985



Shri. P. M. Belliappa 1982



Dr. T. G. K. Charlu 1979-1982



Dr. B. K. Venkatappiah 1969-1979

## Our Employees Together We Achieve

Over the years, RECLites as they are fondly called, have been the most instrumental element of success for the company. REC was established with a strength of 22 employees and earned a profit of ₹ 3 crore in its first year of business and from strength to strength, the company grew in its portfolio and its reach. The passion and work ethic that fuels every aspect of the company has been its employees, and REC has always recognized the need for their well-being at the organization. Over the years, the company has created effective ways of improving the work culture and work flexibility for all employees. The company has initiated different workshops and training programs aimed at keeping the employees motivated and less stressed out at work, in return benefiting the company with increased productivity and less conflict.

REC's encouraging work-life balance routines such as Yoga Sessions, Nukkad Nataks, Painting Competitions, Sports Events, Blood Donation Camps, Movie Screenings, Annual Day Event, Out-bound Training Programmes amongst others, have resulted in greater loyalty, high retention rate and nurturing of in-house talent.

REC believes in encouraging its employees to find a balance between their professional and personal lives. Moving forward, REC will always be working towards bringing satisfaction and inner peace to its employees, thereby enabling them to excel in all of their roles.



Blood Donation Camp by employees of REC



REC Chairman & Managing Director and Director (Technical) addressing the employees during the 'Sharad Ritu Mela' event of REC



Leadership Training for Women Employees at Indian Mountaineering Foundation, New Delhi



Employees singing during 'Sharad Ritu Mela'



REC Internal Football Tournament



Employees performing stage play during 'Sharad Ritu Mela' 2019



Vigilance Awareness Week collage making competition



Induction programme for employees joining the company



REC's 50<sup>th</sup> Annual Day, Hon'ble Minister Shri R K Singh, Secretary (Power) Shri A K Bhalla, Shri Ajeet Agarwal, the then Chairman & Managing Director and Director (Finance) and Shri S K Gupta the then Director (Technical) inaugurating the event.



REC's monthly Yoga session



REC Internal Chess Tournament



**REC Internal Painting Competition** 



Swachhta Hi Seva Debate Competition





**REC Internal Cricket Tournament** 



Swachhta collection drive organized in REC HQ, New Delhi



Quiz contest on India's freedom struggle



Singer Amit Trivedi performing during the REC 50<sup>th</sup> Annual Day celebration



REC Library



REC badminton contingent, Inter PSU Badminton Tournament

## **Strong Identity, Deep Roots**

## Glimpses from the Past

### RURAL ELECTRIFICATION CORPORATION LTD.

### Address by the Chairman, Shri B. Venkatappiah



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Statement of Shri B. Vankatappiah, the first Chairman of REC, published in The Times of India, October 7, 1971



# REC Invests in the Country's Happiness. The Returns are Amazing.

Rural Electrification Corporation. Reaching the farthest villages, and the tiniest towns. Warming them to life by giving them the miracle of electricity, for their homes and shops. For their drinking water, their irrigation pumpsets and small industries. Power that means happiness for millions of people in millions of ways.

### REC: A Growth Organisation

REC. A company dedicated to continued growth. Since 1969, REC has been bringing prosperity to rural areas of the country, with remarkable success. And remarkable returns. Consider its growth pattern. From energising 1.12 lakh pumpsets upto '75 to over 18 lakh till March '85. From electrifying over 19,200 villages upto '75, to over 1.72 lakh till March '85. By the end of the 6th Plan the level of Rural Electrification has risen from a mere 12.8% from REC's date of establishment to 64.1%. And from Rs. 53 lakh in '70-71, REC's profits have increased to over Rs. 92 crore in '84-85.

REC. In each facet, success. Achievements that are constantly growing, progressing towards the ideal of the Government's progressive 20-point programme—improved socio-economic conditions for all.

### REC: A Development Organisation

REC. Taking electricity to each part of India. A development force that generates employment in millions of mandays. Increasing food production in millions of tonnes, by irrigating lakhs of additional hectares of land.

Consider its Resources. Rising from Rs. 32.29 crore, to over 1,698 crore in 15 years. Increasing input, which means increased output. Figures which show prosperity. Facts which mean success.

### REC: A Committed Organisation

REC's future is bright. With sanctions touching more

than Rs. 3,035 crore, the Corporation's financial assistance now covers over 9,800 projects in various parts of the country. With successful projects, and a rising growth graph, it is poised for further success. Committed to causing electrifying changes in the way rural India lives, in the way it will live. Growing more powerful each day, in diverse ways.

Rural Electrification Corporation. Investing in the Country's happiness. The returns—in happiness, and in profits, grow greater each year.



### Rural Electrification Corporation Limited

(A Govt. of India Undertaking)

D.D.A. Building, Nehru Place; New Delhi-110 019

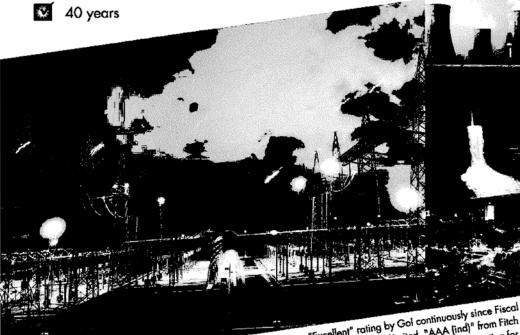
'REC Invests in the Country's Happiness' Advertisement, published in The Times of India, February 3, 1986

### Financing Pan-India **Power Projects for**

Public & Private Sector

Central & State Level Power Utilities

Generation, Transmission & Distribution



• A "Navratna" status conferred by Department of Public Enterprises • "Excellent" rating by Gol continuously since Fiscal 1994 • Hold the domestic rating of "AAA/Stable" from CRISIL Limited, "LAAA" from ICRA Limited, "AAA [ind]" from Etch and "CAPE AAA [Triple All for long-term horrowings for fiscal 2010 • Interestionally rating an account the same and "CAPE AAA [Triple All for long-term horrowings for fiscal 2010 • Interestionally rating an account the same and the sa 1994 • Hold the domestic rating of "AAA/Stable" from CRISIL Limited, "LAAA" from ICRA Limited, "AAA [ind]" from Fitch and "CARE AAA [Triple A]" for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for long-term borrowings for fiscal 2010 • Internationally rating for long-term borrowings for fiscal 2010 • Internationally rating for long-term borrowings for fiscal 2010 • Internationally rating for long-term borrowings for fiscal 2010 • Internationally rating for long-term borrowings for fiscal 2010 • Internationally rating for long-term borrowings for fiscal 2010 • Internationally rating for long-term borrowings for fiscal 2010 • Internationally rating for long-term borrowings for fiscal 2010 • International 2 and "CARE AAA (Triple A)" for long-term borrowings for fiscal 2010 • Internationally rating on par with sovereign rating for India, "BBB." from Fitch and "Baa3" with stable outlook from Moody's Limited for long-term borrowings • Loan sanctioned India, \*BBB." from Fitch and \*Baa3\* with stable outlook from Moody's Limited for long-term borrowings • Loan sanctioned and disbursement of \*Rs. 40,745.9 crore and \*\*Rs. 17,157.3 crore respectively for Fiscal 2009 • Nodal Agency for Rocco and aspursement or "ks. AU, 143.7 crore and "ks. 11, 131.3 crore respectively to RGGVY, we occupy a key strategic position in Gol's plan for growth of the power sector.



## **REC POWERs PO**

\*Sanctioned Rs. 21,708.3 crore for generation projects, Rs. 16,937.6 crore for transmission and distribution projects and Rs. 2,100 crore under others. \*\* Disbursed Rs. 7,850.6 crore for generation projects, Rs. 7,266.7 crore for transmission and distribution projects and Rs. 2,040 crore under others.

Rural Electrification Corporation Limited (the "Company") is proposing, subject to market conditions and other considerations, a further public issue of its equity shares and has filed a Red Herring Prospectus with Registrar of Companies, National Capital Territory of Delhi and Haryana at New Delhi, the Stock Exchanges and the Securities and Exchange Board of India ("SEBI"). The Red Herring Prospectus is available on the websito of SEBI attwww.sobi.gov/in and the websitos of the BRI.Ms attwww.kmcc.co.in, www.dspmf.com, www.icidsecurities.com, www.imfinancial.in and www.abnamro.co.in. Investors should note that investment in equity shares involves a high degree of risk and for details relating to the same, see the section titled "Risk Factors" of the afformentioned Red Herring Prospectus. This advertisement does not constitute an offer of securities for sale in any jurisdiction, including the United States. Securities may not be offered or sold in the United States absent registration under the U.S. Securities Act of 1933, as amended, or an exemption therefrom. The Company has not and does not intend to register any securities under the U.S. Securities Act of 1933, as amended, and does not intend to offer any securities to the public in the United States. The Company will not be registered under the U.S. Investment Company Act of 1940, as amended, and investors will not be entitled to the benefits of that Act. No money, securities or other consideration from any person inside the United States is being solicited and, if sent in response to the information contained in this advertisement, will not be accepted.

Registered and Corporate Office: Rural Electrification Corporation Limited

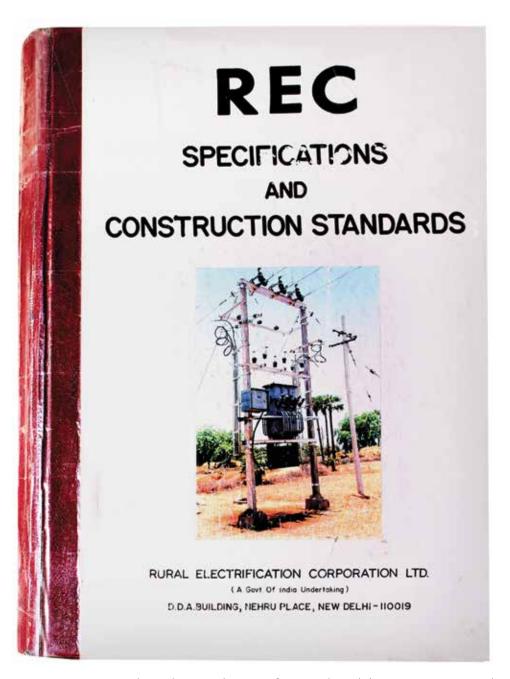
Core 4, SCOPE Complex, 7, Lodhi Road, New Delhi 110 003, India. Tel.: +91 11 2436 5161; Website: www.recindia.nic.in



'REC Powers Power' Advertisement, published in The Times of India, February 15, 2010



Erection of Porta Cabins during REC's foreign consultancy project in United Arab Emirates, 1983



REC, through several years of research and discussions at annual conferences on 'Standardisation, Technical Development and Training in Rural Electrification', issued specifications of materials and construction standards. These were published in comprehensive manuals which were circulated across the power sector

विविद्यात्राः एकत्वविविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्याविद्य CERTIFICATE OF INCORPORATION No.\_\_\_5095 of 19 69-70 I hereby certify that. CORPORATION TRANSPELIMITED is this day incorporated under the Companies Act, 1956 (No. 1 of 1956) and that the Company is Limited. NEW DELHI Given under my hand at ... TWENTY-FIFTH (3rd) day of JULY (Sravena) SIXTY NINE (SAKA-1891 One thousand nine hundred and ..... (V.S.Joneja) Assistant Registrar of Companies. Delhi.

Certificate of incorporation issued to REC on 25th July, 1969

## History of REC's Logos





1969-84

1984-2001

In the year 1969, REC's mandate was primarily to help State Electricity Boards to energize agricultural pump-sets across the country. This step was taken to boost agriculture and overcome the crippling food shortage on account of three successive years of deficient monsoons. REC was also mandated to provide financial assistance to accelerate the pace of rural electrification in the overall context of planned programmes for increased agricultural production. Thus, these initial logos depicted the story of REC's role in India's agricultural growth.



The turn-around of India's agricultural production was synchronous with REC's plan of expanding its mandate from being merely restricted to rural electrification to now encompassing financing of power projects. This logo depicts REC's diversification into new areas of business.



2006 onwards

In 2007, with business expansion and incorporation of two subsidiaries, REC started offering financial, technical and consultancy services across the power sector value chain. "Endless Energy. Infinite Possibilities" aptly sums up this mission, vision, values and business today. Like the Sun's energy, REC's determination to tap all possibilities to make India power sufficient, is endless.

# The Road Ahead The Journey to Infinity

Over these fifty years, REC has made great advances, from illuminating India to becoming the country's premier financial institution in the power sector. The company has grown leaps and bounds in the last five decades, not only in its revenue, net-worth and scope of work but also in its impact on the lives of the people of the nation.

REC occupies a unique space in the Indian power sector development – as financier, facilitator, mentor and enabler of access to quality power for all citizens of India. REC continues to seek new partners, both in national and international arena, who share the vision and mission for a more robust and accelerated power sector development in the country, with a focus on New and Renewable Energy.

The Government of India has set the target of 175 GW of renewable energy capacity by 2022 and plans to shift completely to E-vehicles by 2030. REC is an important part of that dream. The corporation has been financing renewable energy projects for more than ten years now. It is a matter of

pride for the company that the green energy portfolio continues to grow year-on-year.

The company has, through its commitment and determination, completed the mammoth task of achieving 100% electrification of all inhabited census villages in the country followed by universal electrification of all willing households in the country under 'SAUBHAGYA'.

The power sector is undergoing an accelerated transformation globally, by virtue of technological innovation and response to climate change protocols and REC shall continue to consolidate and strengthen its unique positioning in the Indian power sector and work closely with the national as well as state governments, power utilities and the private sector.

REC is confident that with constant support, cooperation, guidance and dedicated efforts of all the stakeholders, the company will grow from strength to strength in the times ahead.





## Acknowledgement

On behalf of REC Ltd., we express our gratitude to all those who helped in bringing together this special publication for the company. We also express gratitude for the support our company has received during its journey over these years from the Government of India as well as our various stakeholders. REC also expresses its gratitude towards the Ministry of Power for supporting the company in all its endeavours in furthering its spread and positive impact.

REC places on record its appreciation of the efforts made by each and every member of its team who through their dedication, enthusiasm and expertise have lent support in this successful journey. With consistent performance in the past, under able leadership and with support from the Government of India, REC looks forward to a confident and inspiring future!



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