



Energy That Moves Life

K-ELECTRIC SUSTAINABILITY
OVERVIEW 2016-2019





K-ELECTRIC:

AN INTRODUCTION

Founded in 1913, K-Electric has powered Karachi for over one hundred years. Through a network spread across 6,500 square kilometres, KE supplies power to over 2.8 million customers across Karachi, Dhabeji and Gharo in Sindh, and Uthal, Vinder and Bela in Balochistan.

KE is the only vertically integrated power utility in Pakistan, which means it manages all three key stages – Generation, Transmission and Distribution – of producing and delivering energy to its consumers.

Other than providing energy, KE is actively involved in the well-being and development of the communities it services. The Company has executed a series of projects, ranging from youth development, to infrastructure investments to social projects, which all aim at creating a better environment and greater social benefit for all involved. From sports to Project Ujala to our cumulative Climate Change Framework rolled out in 2013, KE is constantly working towards meeting its commitment of providing clean, reliable and sustainable energy to Karachi, one of the worlds largest cities.

In line with our Climate Change Policy, the Company is continuously improving upon its clean energy practices. Two of the Company's power plants, BQPS-II and KCCPP, are among the first power plants in Pakistan to achieve ISO 50001 Energy Management System certification. Additionally, in its efforts to create a greener Karachi, the Company has enabled the planting of more than 120,000 saplings across the city.



Over **USD 2.4bn**
invested since 2009
for a sustainable future



Serving over **2.8mn**
customers



USD 3bn
To be invested in sustainable
development over the next 4 years



156,192 consumers engaged in
2017-2018 for energy conservation
and efficiency



16.8% reduction
in transmission & distribution
losses since 2009



Over **70% of Karachi**
now loadshed free, vs. 23% in 2009



Benefiting **4.9mn** lives
annually through the
Social Investment Programme



Empowered over **2,000**
youngsters through the annual
Lyari Football League



Promoting diversity through
over **300 women**
in management positions



Over **120,000**
trees planted



10,000+ free patients
treated at Ujala medical camps



5.4mn people have
benefited through Project Ujala



MESSAGE FROM
**SYED MOONIS
ABDULLAH ALVI**

CHIEF EXECUTIVE OFFICER, KE

Sustainability is an integral part of any business as it ensures a better future all around. Keeping this in mind, I am pleased to introduce our Sustainability Overview 2016-2019, a reflection of KE's journey as a business to deliver a more sustainable future, be it by actively engaging communities or inspiring others to do better with regards to world-class corporate citizenship.

At KE, delivering a consistent flow of energy to customers is our priority. This is evident through our commitment to drive progress through a successful and responsible long-term energy business. We take pride in working towards our objective of providing uninterrupted power supply to Karachi, the economic hub of Pakistan, thereby indirectly and directly benefitting the economy of Pakistan. All that we have achieved thus far would not have been possible without the dedication and innovative thinking of nearly 11,000 employees at KE.

As Pakistan's only vertically integrated power utility, we understand and advocate the importance of conserving energy. We continuously strengthen our generation efficiency to reduce costs and emissions. Our vision for Karachi extends beyond power provision. We want the city to benefit by being more energy conscious. Through the Energy Conservation Programme, KE enables households and industries to reduce costs while simultaneously protecting the environment.

Our dedication and commitment towards benefitting the social sector is demonstrated via our Social Investment Programme. We are proud to say that our number of partners has increased to 16, with organisations such as The Indus Hospital, Lady Dufferin, Kidney Center, Karawan-e-Hayat, TCF, Behbud Association and SOS Village.

With immense gratification, I can say that KE has achieved much already, and we will continue to work towards doing more. As we take more timely actions, building further on to what we have achieved so far, our set of sustainability commitments go beyond 2019, since sustainability lies at the heart of everything we do and everything we are.

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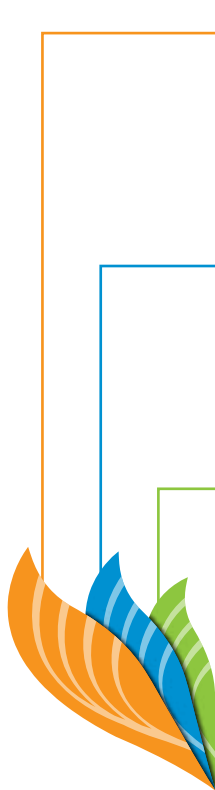
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ENERGY

Like the city it serves, KE has come a long way in the past one hundred years. In our second century, we aim to become a regional leader among utilities and an example of global excellence in sustainable energy provision.







OUR BUSINESS

Generation

Since 2009, we have invested over USD 1.1bn in our plants, laying the foundations to meet the growing power demands of Karachi, the economic hub of Pakistan. In continuation of its commitment to powering Karachi, KE has announced two new power projects, namely a 900 MW RLNG fired power plant to be known as BQPS-III and a 700 MW coal-fired power plant. KE will have 100% ownership of BQPS-III and an equity stake in the 700 MW coal-fired power plant. The two plants are expected to be commissioned in 2021 and 2022 respectively.



Fleet Efficiency improved by **22%** between 2009 and 2019

GE Jenbacher Korangi



Bin Qasim Power Station - II (BQPS-II)



Korangi Combined
Cycle Power Plant (KCCPP)

Our Plants

GE Jenbacher SITE



Bin Qasim Power Station - I (BQPS-I)





Transmission

K-Electric's transmission system comprises a total of 1,283 km of 220kV, 132kV and 66kV lines, with 68 grid stations and 160 power transformers. In FY 2019, KE took significant steps towards enhancing the existing transformation capacity and improving system reliability. This included improved fault response, as indicated by 67% reduction in unserved energy on power transformers & 24% reduction in number of outages of transmission lines as compared to FY 09.

The over USD 450 million TP-1000 transmission enhancement project is scheduled for completion by the end of 2nd quarter of FY 2020. The company completed the major part of the civil and electrical design during FY 2017. The project is on course of a successful completion and so far 4 new grid stations and 21 power trasfos. have been added in the system. Additionally, some 77.24 km length of 10 transmission lines have also been rehabilitated.



Since 2009, **12** new grid stations added



64% reduction in transformer tripping in FY 19 vs. FY 09



TP-1000 is over **USD 450m** enhancement plan, adding 1000 MVA to the Extra High Tension network



1,795 MVA total capacity enhancement since FY 09

“Through major investments, upgradation and maintenance of our generation and transmission infrastructure, we have a robust fleet, a strong network, and the highest production capacity in KE's 106-year history.”



Dale Sinkler
Chief Generation &
Transmission Officer

Distribution

KE's distribution network covers more than 6,500 square kilometres and is one of the largest in the world. It serves over 2.8 million individual customer accounts.



100%

exemption from loadshed
for all industrial zones



70%

Over
of customers are loadshed
free, vs. 23% in 2009.



Around **7,500** PMTs
have been converted to
Aerial Bundled Cabling (ABC)



Transmission & Distribution losses
reduced to an all-time low of

19.1% as of FY 19

“As a utility operating in the developing world, KE faces many challenges, but our distribution teams are dedicated to improving every area in our massive network for a better, safer and more reliable system.”

Amer Zia
Chief Distribution Officer





OUR PEOPLE

With nearly 11,000 employees engaged in its various functions, KE has developed and implemented a series of initiatives aimed at creating a culture of inclusiveness, excellence and commitment. With best practice policies in place, KE believes that its employees will be its drivers of innovation and growth in the coming years.

KE has recently started to increase female representation in different areas of its business and support functions. From the first female Meter Data Maintenance Officers (MDMO) to female electrical engineers and postgraduate management professionals, KE has women from all walks of life as part of the workforce. In order to support the working mothers among its employees and enable the continuation of their professional journey, the Company has instituted a "Childcare Assistance" policy and maternity leaves of up to six months.

KE also signed an agreement with NOWPDP in March 2018 to make its premises more easily accessible for persons with disabilities.

As a recognition of its efforts to inculcate a more inclusive culture, KE won the Diversity and Inclusion Award in the Proactive Category at the Global Diversity & Inclusion Benchmarks Conference 2017.

“As At K-Electric, we believe everyone has the ability to make a difference. We encourage all of our employees to develop a forward thinking approach and suggest ways on how to improve the Company's environment for everyone.”



Rizwan Dalia
Chief People Officer
& Company Secretary





KE educates students in order to inculcate safety-oriented behaviour

Sustainable Safety

With safety as one of the Company's key priorities, KE works to ensure that its people and the communities in which it operates are cared for. It is with this in mind that our HSEQ team works to spread awareness regarding personal, public, technical and environmental safety through all channels.

Our motto

NO COMPROMISE ON SAFETY



Total **10,659**
employees trained in KE for
45,407 employee-hours



15
Safety Walks conducted
during day & night



293
Emergency Evacuation/Fire drills
conducted across KE



3,102
Safety & Hygiene Inspections
carried out HSE teams
throughout KE

RECOGNITION

KE's transformation turnaround success has been recognised by various local and international institutions



Environment Excellence Award
2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 & 2019



Environmental Risk Assessment Award
2015, 2016, 2017, 2018 & 2019



2019: 1st Customer Loyalty Award
KE wins 1st Pakistan Consumer loyalty award 2019, from the Consumer Rights Protection Council



2018 & 2019: KE wins Digi awards 2018 & 2019
KE wins digital awards on Best Use of Technology for the year 2018 & 2019



Occupational, Health & Safety Award
2017 & 2019



NFEH CSR Award 2019 for 2nd consecutive year for Sports & Recreational Activities



2014, 2018: CSR Corporate Social Responsibility
Certificate of Excellence



Fire Safety Award
2012, 2013, 2014, 2015, 2016, 2017, 2018



2018: 7th & 8th Corporate Social Responsibility Awards
KE won the award for its Project Ujala initiatives under Corporate Community Partnership Category



2016 & 2017: Employer of the Year 2016 at Employers Federation of Pakistan Awards
First position in the category of "Large National Companies" for best practices in HR Management, Health & Safety, Skills and Vocational Training Initiatives and 2nd position in 2017 EFP awards



2016 & 2017: GE O&M Excellence Award
Most reliable (99.4%) 9E Gas Turbine User in Middle East & Africa awarded to Bin Qasim Power Station – II 560 MW CCP



2016: ICAP Professional Excellence Award 2016 second position-
For raising USD 415 million financing for TP-1000 and strategic initiatives



Best Presented Annual Report Award 2014 & 2015
By the South Asian Federation of Accountants (SAFA)



2014: FT/IFC Transformational Business Award for Project Finance -Energy



COMMUNITY

KE is committed to sustainable social development and focuses on empowering the communities that we work with through a wide range of educational, health and other social projects.







SOCIAL INVESTMENT PROGRAMME

KE provides subsidised electricity to 16 social welfare organisations of Karachi, including schools and major hospitals. With this programme, which 'empowers through power', KE makes a major contribution to community development as well as the health and education sectors, providing a lifeline for the underprivileged.

“KE has adopted a structured approach of partnering with communities, ensuring that our infrastructure, technology and customer-service initiatives do not stand in isolation but are part of a holistic programme of social development.”

Syed Fakhar Ahmed
Chief Marketing & Communication Officer



4.9 MILLION

people were benefited in 2019
through our Social Investment Programme.



Our 16 Social Investment Programme (SIP) partners benefited 4.9 million people in 2019.



SIUT is one of the largest urology care and renal transplant institution in Asia, providing specialized medical care to the population at large, free of cost.

People benefited per year
2,000,000



The hospital provides state-of-the-art, free-of-cost, tertiary level healthcare with a focus on research.

People benefited per year
745,911



LRBT provides comprehensive eye-care, ranging from simple refraction to the most advanced retinal surgery and corneal transplants.

People benefited per year
640,705



SINA was founded in 2007 to provide quality healthcare to less privileged communities, including urban 'slums'. More than 80% of SINA's beneficiaries are women and children.

People benefited per year
629,302



The Kidney Centre is a proverbial oasis of complete medical relief and treatment and the premier philanthropic institution for renal and renal-related diseases.

People benefited per year
226,158



Behbud Association is a non-profit NGO run by volunteers for almost 50 years to empower women, children and their communities by providing healthcare, education & income generation opportunities.

People benefited per year
125,000



TCF is one of Pakistan's leading organisations in the field of formal education, providing 100% free education to underprivileged children.

People benefited per year
121,023



Lady Dufferin Hospital

The hospital is the largest maternity hospital in Pakistan, providing state-of-the-art mother and child health care being managed on a non-profit basis.

People benefited per year
90,000

Our 16 Social Investment Programme (SIP) partners benefited 4.9 million people in 2019.



Founded in 1996 with the mission of making Pakistan free from Thalassaemia, the Kashif Iqbal Thalassaemia Care Center provides free of cost treatment to underprivileged patients.

People benefited per year
80,000



Karwan-e-Hayat is a leading provider of psychiatric care, offering a full range of services for the mentally ill.

People benefited per year
65,000



FESF is dedicated to enhancing the quality of life for the disadvantaged members of the community by investing in their educational development, and empowering them to reach their full potential.

People benefited per year
61,261



APWA RLCC works for the empowerment of youth and women in the area through improved health, education and economic independence.

People benefited per year
42,730



Working for Leprosy elimination, TB & Blindness Control and Community Development, the Marie Adelaide Leprosy Centre – MALC has been working in the community for the last 56 years.

People benefiting annually
33,000



NICVD Chest pain units provide emergency services at their quick approachable areas 24/7

People benefitted per year
20,541



The only free cancer hospital with a hospice, 50 beds for inpatients and diagnostic facilities including mammography, ultrasound radiography, pathological laboratory, as well as an in-house pharmacy offering a complete range of cancer treatment drugs.

People benefited per year
20,000



SOS Children Village is a home-like orphanage which provides loving care, security, higher education and job-training.

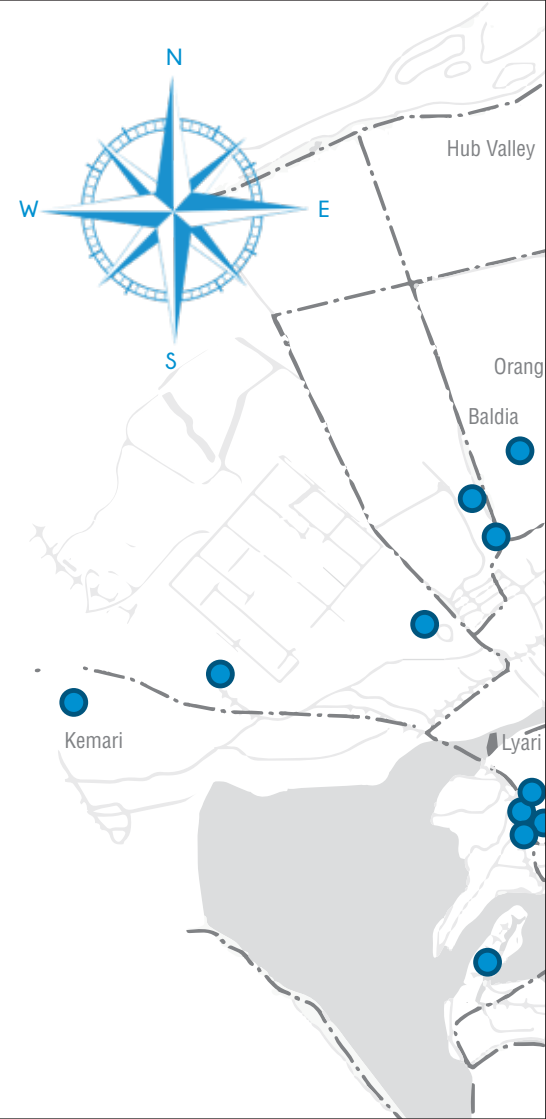
People benefited per year
6,637

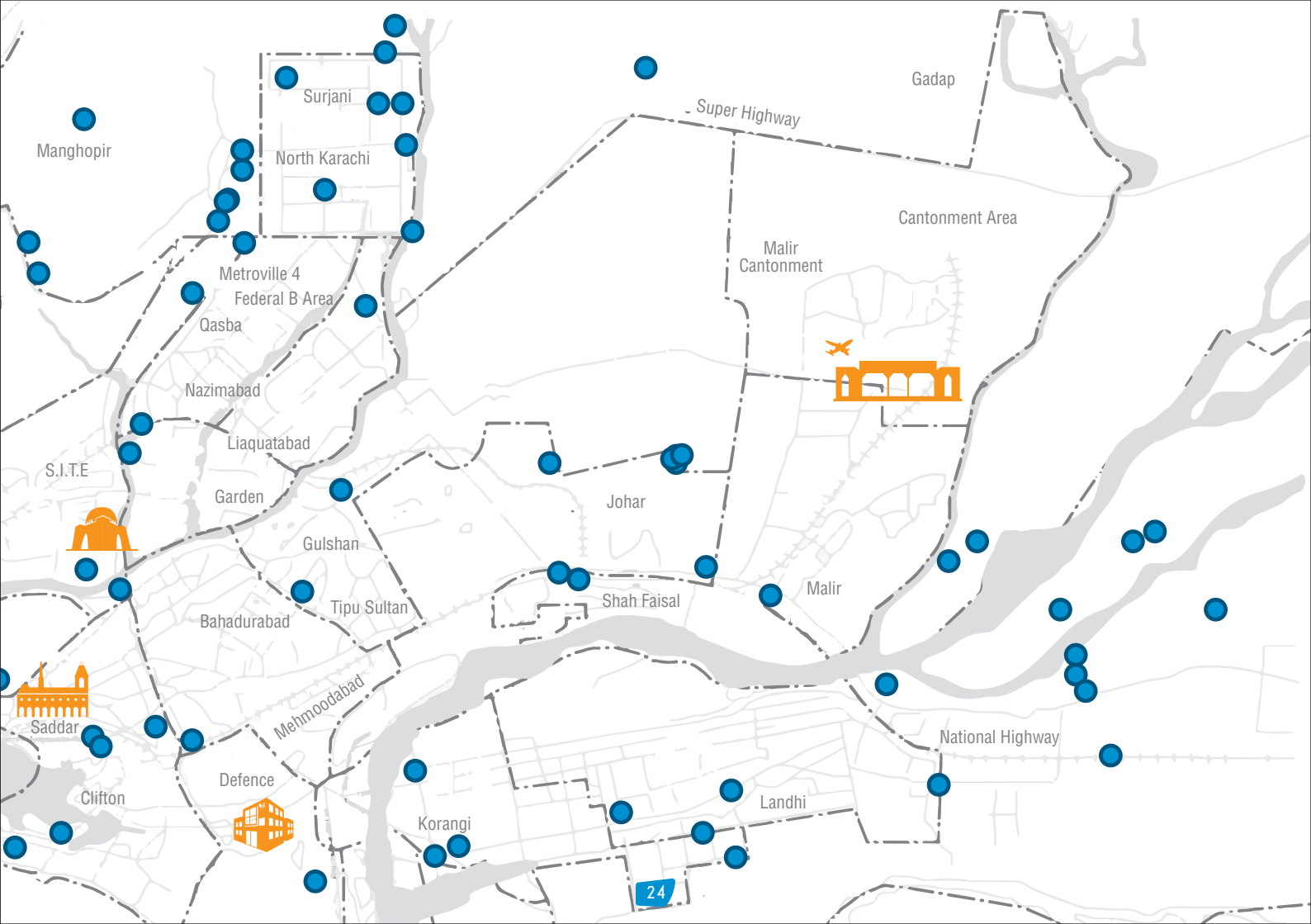
A CITY-WIDE IMPACT: KE'S SOCIAL FOOTPRINT

KE regularly invests in enhancing the quality of power and the system capacity, which in turn increases coverage area. Mostly, investments ensure fault-free power supply to strategic hospitals and support the expansion of a specific facility.

The power utility provides free or subsidised electricity to the 16 health and education institutions listed on the previous page. This includes their networks, which span the length and breadth of Karachi - as indicated in this map.

● Site of a KE SIP partner









Emergency Response

In times of calamities, such as floods, fire incidents and bomb blasts, KE has set an industry precedent by stepping forward to support those affected. In early 2018, KE reached out to 400 families affected by the earthquake in Bela, Balochistan. With an acute food shortage in the area following the disaster, KE focused its efforts on providing food relief.



Summer Preemptive Campaigns

KE partners with major institutions like the Government, Aman Foundation, Pakistan Red Crescent Society, Karachi Relief Trust, Voice of Karachi and many others to provide relief to Karachi's citizens during the summers. Since 2015, KE has partnered with lifeline hospitals like Indus Hospital, JPMC & Civil Hospital to provide them with thousands of water bottles & ORS as well as Iftari boxes during Ramazan.

This year KE trained 1,000 volunteers for basic first-aid during the heatwave camp support.

Load Enhancement at Jinnah Postgraduate Medical Centre



Patient's Aid Foundation is undertaking the construction of a state-of-the-art, nine story Surgical and OPD Complex with 609 beds and 18 operating theatres, and an OPD capacitated to cater 2,500 patients per day. Additionally, the organisation has introduced Cyberknife surgical technology.

With the new facility and technologies in place, KE provided JPMC with a new 7.5 MW bulk supply connection, free of cost.



Blood Donation Camps

KE hosts a company-wide blood drive in collaboration with The Indus Hospital Blood Centre (TIHBC). Blood Donation camps are conducted across all business and support functions. Over 2,000 employees participated in the drive which concluded with the successful collection of 1,331 pints of blood and helped save nearly 4,000 lives.



Ramzan Donation & Pre-aid Celebration:

KE distributed Eidi amongst the orphans and senior citizens sheltered at the Shed Foundation. The colorful kurtas and other Eid gifts brought smiles to the kids faces.

KE Scholarship Programme 2019

In line with KE's commitment to enabling and empowering our employees, KE launched the Scholarship Programme 2019 through which children of our Non-Management Staff (NMS) employees can avail technical scholarships to enroll in a vocational course of 6 months duration at The Hunar Foundation (THF) and earn a City & Guilds Diploma.



This is an equal opportunity programme, open for all children of NMS employees who have completed Matriculation (minimum educational requirement) and are below 25 years of age. Courses like mechanical manufacturing, electrical installation as well as beauty and hairdressing are being offered for male and female candidates.



INTEGRATING COMMUNITIES WITH BUSINESS OBJECTIVES

Ujala and ABC

Project Ujala is being carried out all across Karachi to end power theft and bring about a positive change for thousands of people by spreading ujala (Urdu for 'light') in their lives.

Ujala encompasses a comprehensive collaboration with the community in the areas of education, health and social development. Through this engagement and the installation of kunda-resistant Aerial Bundled Cables and low-cost meters, KE will pave the way for:



Better livelihoods



Reliable supply
of electricity



Consistent Voltage





328 communities engaged



5446 PMTs converted



Over 300,000 low-cost meters provided for underprivileged communities



5.4mn lives benefited

One of KE's key business projects is community mobilisation to convert 'High Theft Areas' into 'Model Theft-Free Communities'. Project Ujala has directly benefited 5.4 million people and 328 communities have been converted into model communities.

The theft-free community conversion project has proved to be a tremendous success both for the consumer and the organisation. The converted areas experience a reduction in loadshedding, and the fault ratio on average decreases by 95%.

This has only been possible through a sustainable engagement with the communities.

Through Project Ujala, KE reaches out to social, political and religious influencers in the targeted, underprivileged communities for ABC conversion. In addition, free eye camps and skin camps with provision of free medicines as well as massive clean-up drives, are organised for communities who come forward to get legally connected to KE's distribution and billing system.

KE also engages the communities through sports engagements like football & cricket creating a healthy bond. In addition, KE installs water purification plants in these communities so that potable water is accessible to all thus minimising water borne diseases. Creation of football grounds and parks and community plantation activities are few of the initiatives that are done to uplift the communities.

COMMUNITY CASE STUDY

PROJECT UJALA HAS ACHIEVED GREAT SUCCESS IN 2018

Karachi Timber Market

01

14 of the 19 pole-mounted transformers fully converted to ABC, while 3 new ones have been added.

02

Aggregate technical and commercial loss reduced from 37.02% to 17.17%.

03

Recovery rate raised from 89.29% to 98.80%.

04

Before initiating project, meetings held with Karachi Timber Merchant Group, ensuring community support.

05

The new connections are expected to help KE recover around PKR 4.3mn in monthly losses.



A Community Management Committee

Shah Latif Town Sector 17-A

01

19 pole-mounted transformers fully converted to ABC.

02

Community Engagement Team briefed area influencers to eliminate resistance and enable smooth completion of the project.

03

Zero loadshedding since completion of the project.

04

Aggregate technical and commercial loss reduced from 55.5% to 23.3%.

05

Recovery rate raised from 79.2% to 95.5%.



Health camps are an integral part of Project Ujala

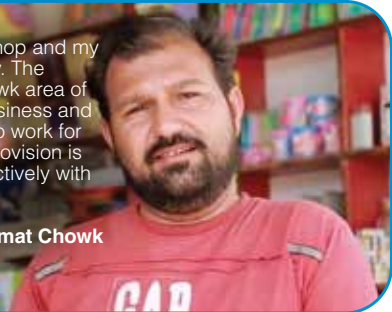
“It's highly remarkable that KE is improving infrastructure in underprivileged communities and today's event, in making 1st feeder of Shah Latif Town, a zero loadshed area is greatly appreciated. We strongly believe that current project will help to make other areas load shed free as well.”

Mr. Raja Abdul Razzaq, MPA



“I am running a photocopy & stationary shop and my business primarily depends on electricity. The loadshedding exemption in Rehmat Chowk area of Orangi Town has directly affected my business and now I open my shop early and am able to work for longer hours. This improved electricity provision is helping me to do my business more effectively with lower cost and better profitability.”

Aslam Photocopy Shop, Owner at Rehmat Chowk



“Timber Market is one of the oldest and largest in the city and its core business mainly relies on electricity. The current network enhancement under Project Ujala has resulted in exemption of loadshedding in the Market and left a very positive impact on overall business of Timber Market. This is a great initiative and we urge other communities to take advantage of this opportunity.”

Mr. Suleman Soomro, President Karachi Timber Merchant Group





Aao Mil Kar

Ujala

Phelain





Youth engagement platforms

Industrial Visits

KE's knowledge sharing initiative aims to impart practical and invaluable knowledge to students and faculty members from engineering universities. During an industrial visit, students gain an in-depth understanding of KE and how a real-life power plant functions.

Over 10,000 students benefited

Major institutions
which have partnered with us:



Computer lab donation to APWA RLCC school:

KE donated a fully equipped computer lab to All Pakistan Women's Association (APWA) Rana Liaquat Craftsmans Colony Health Centre (RLCC) school. APWA RLCC school works in the field of adult literacy and women empowerment in the area of Shah Faisal Colony.

The Sponsorship of NED for Formula Society of Automotive Engineers (SAE) event in Italy

KE sponsored NED's mechanical car, that participated in 2016 Formula SAE event in Italy. This was the first time a team representing Pakistan participated in the prestigious event.

KE – NED Lab

In order to further strengthen the knowledge sharing platform for future engineers, KE has established a first of its kind, state-of-the-art Electrical Engineering Lab at NED University. This enables electrical engineering students to gain first-hand practical access to complex electrical equipment, while enhancing R&D activities in line with KE's research-driven approach. The equipment includes modified relays testing benches, transformers and various other valuable devices used in grid stations.





SPORTS

KE has always had a strong affiliation with sports. The organisation continues to invest in its professional football and cricket teams, while also building on its major achievements in youth engagement.

The KE Sports department not only manages KE's football and cricket teams, but also focuses on the grassroots development of sports in areas of the city which face socio-economic and law and order challenges. The overarching aim is to divert disenfranchised youth towards positive outlets and increase the national profile of sports.

KE is celebrated as a centre of sports excellence, helping young stars to evolve into world-class sportsmen. KE has helped develop the careers of cricketers Shahid Afridi, Younus Khan and Sarfraz Ahmed, boxers Hussain Shah and Ali Bux, footballers Essa Khan, Lal Muhammad, Hanif Baloch and Samad Baloch, and the hockey player Zeeshan Ali, among many others.

KE has several new initiatives in the pipeline, including forming a boxing team and organising more youth development programmes, such as cricket and football tournaments for girls and boys.





2,000

youth from Lyari have taken part
in the KE Lyari League
football trials



38

Lyari League players
have so far been selected
for Pakistan U-14

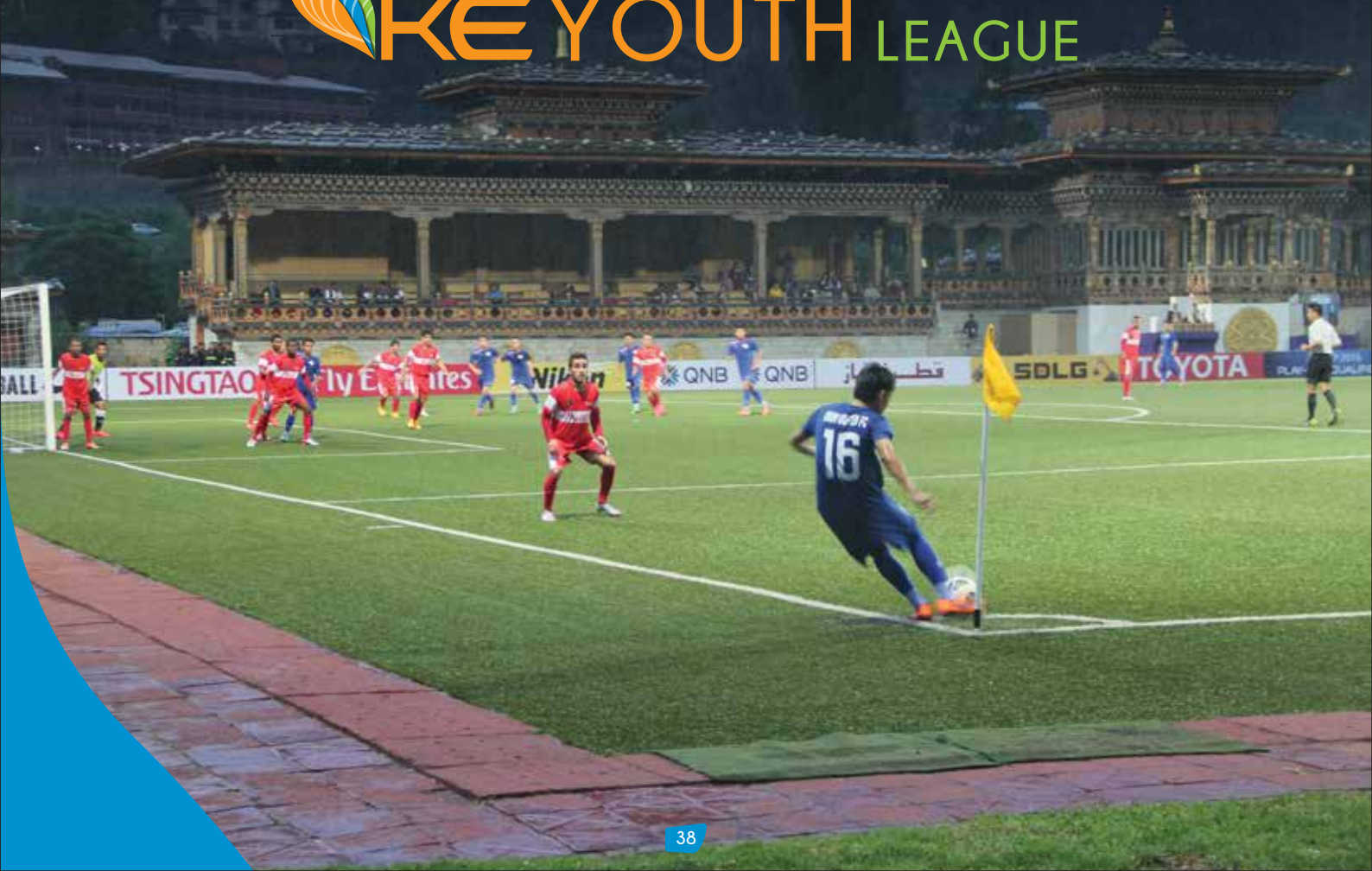
Pakistan Premier League

The KE football team performs at the highest level, in the Pakistan Premier League. The team won the division in 2014/15. As Pakistan champions, KE participated in the Asian Football Confederation (AFC) Cup Qualifiers in Bhutan and third tier in Bahrain.

Lyari League

The annual KE Lyari League has so far given more than 2,000 children from Lyari, a chance to perform and showcase their talent. 38 children who have played in the League have been selected for the Pakistan Under-14 team, some of whom have gone on to play in international tournaments such as the Asian Football Confederation Championship. The League players, who are required to concentrate on their education alongside football, are success stories and have become role models for their peers in the community.

KEY YOUTH LEAGUE





KE and UNICEF

We have partnered with UNICEF, which includes a pledge to support KE's grassroots sports development initiatives and to increase awareness regarding polio and preventive diseases.



The KE Youth League

The League covers all districts, in Karachi with regards to cricket and football, and has provided thousands of youngsters with a platform to showcase their abilities and channel their energy into positive activities.





Cricket Cups

Having been runners-up in 2015, KE won the 21-year-old Karachi Cricket Association tournament in 2016. The Company came in as runners-up in the Corporate T20 Cup in 2016 and were the winners of the sixth edition in 2017.

AZM Cricket & Badminton Tournaments

KE is always keen to promote healthy sports activities among its employees, and more than 250 colleagues participated in the AZM Cricket Tournament 2016. 320 employees participated in the ensuing AZM Cricket Tournaments each in 2017 and 2018. Employees at all levels of the organisation come together for this event, from higher management to fresh recruits, and it has proven to be a tremendous initiative for employee engagement. KE also introduced the Women's Badminton tournament in 2016. In 2017, the Men's Badminton tournament was introduced in which 96 players directly participated, same number of participants played in 2018 as well. In the women's' edition, 96 players from 16 teams participated in both 2017 and 2018.

KE Boxing

KE also participated in the National Mens' & Womens' Boxing Championship in Lahore towards the end of 2017 and returned home with one Bronze medal. Furthermore, the organisation held the first-ever All-Girls Boxing Tournament, becoming the first corporate entity to support female boxing. 20 girls from all 5 districts in Karachi participated in this event, making KE the first corporate entity in the country to organise a female boxing tournament at any level. After 8 years, KE's boxing team, with 5 male and 1 female boxers, participated in the 36th National Mens and 1st National Women Boxing Championships respectively, as organised by the Pakistan Boxing Federation, in January 2018 at WAPDA Sports Complex in Lahore. The KE team secured a sixth position in the tournament.





UJALA SPORTS TOURNAMENTS

KE has organised 6 Ujala Sports events including 2 cricket and 4 football tournaments. 1000+ talented youth directly participated and performed during these tournaments whereas over 30,000 residents and locals witnessed these thrilling matches. MNA, UC Chairmen and other community influencers honored the opening and closing ceremonies of these tournaments.

These tournaments strengthened the relationship with the underprivileged communities where Project Ujala is in progress.



ENVIRONMENT

KE complies with all the applicable national and international environmental regulations throughout its operations. The organisation regularly conducts studies on potential environmental and societal impacts whenever it plans to develop a new project.







OUR GREEN MANAGEMENT FRAMEWORK

Tree Plantation Campaign

KE launched an extensive tree plantation campaign, planting over 120,000 trees across the city including thousands of fruit and other evergreen trees, in partnership with various stakeholders. KE also launched the #PlantforPakistan initiative, an external and internal plantation drive in which KE provides employees and external stakeholders with tree saplings which they plant in their homes and neighbourhoods.

The Earth Hour City Challenge 2016 for Karachi

KE is the first corporate entity to enter in the WWF City Challenge. An MOU was signed between WWF and KE to collaborate activities for the City Challenge, and the Company had pledged to plant 100,000 trees.

With Pakistan ranked among 10 countries affected most by climate change, according to the Global Climate Risk Index, KE realises that major steps are needed to create a more sustainable structure for the country's energy systems. The City Challenge was created to mobilise action and support from around the world. At the time, 163 cities in the following seventeen countries participated in the City Challenge; Brazil, Canada, Colombia, Finland, France, India, Indonesia, Malaysia, Mexico, Republic of Korea, South Africa, Singapore, Spain, Sweden, Tanzania, Thailand and USA.



Over **550** hours of
environmental trainings



#PlantForPakistan

Over **120,000** trees planted
as part of the tree plantation
campaign



#PlantforPakistan





COMPLIANCE & CERTIFICATIONS

KE's electricity generating power stations are compliant with the Environmental Management System ISO 14001, the Quality Management System ISO 9001 and the Occupational Health and Safety Standard OHSAS 18001. Two of the Company's power plants, BQPS-II and KCCPP have been further upgraded to ISO 450001 for Health and Safety Standards.

Sr. No.	Plant Name		Certification		
			ISO 14001	OHSAS 18001/ ISO 45001*	ISO 9001
1	1260 MW Bin Qasim Power Station	(BQPS-I)	✓	✓	✓
2	560 MW Bin Qasim Combined Cycle Power Plant*	(BQPS-II)	✓	✓	✓
3	220 MW Korangi Combined Cycle Power Plant*	(KCCPP)	✓	✓	✓
4	100 MW GE JB Gas Engine Korangi Town Gas Turbine Power Station	(KTGTPS)	✓	✓	✓
5	100 MW GE JB Gas Engine Site Gas Turbine Power Station	(SGTPS)	✓	✓	✓

*Upgraded to ISO 45001

Energy Conservation Outreach and Awareness Sessions

KE is committed to educating its customers on the importance of energy conservation. The organisation has hosted several sessions through which it creates awareness about how to use energy more efficiently which in turn can help combat climate change and result in financial savings on energy bills.

School Program Activities

KE's school initiative for educating children about energy conservation has become a major success, where not only school children but parents, teachers and the overall school communities have embraced KE's message about saving electricity and country's natural resources as part of sustainable living. KE's Energy Conservation (EC) department has spearheaded this task as a mission to educate, empower and enable schoolchildren. The Company developed an exciting and challenging game application for children which reiterates the concept behind conserving electricity. The school program features a monthly habit change checklist to practice energy conservation on a daily basis. Thousands of students around the city have pledged to save electricity as part of this initiative. Additionally, the Energy Conservation department conducted sessions with KE Social Investment Program (SIP) partners, including TCF & Behbud Association.



KE is creating social impact by taking proactive measures to save energy and apply global energy efficiency standards.

IMPACT 2009-2019

Energy Audit

Function	Audits conducted	Proposed load optimise (MW)	Reduction in CO2 (MT CO2/annum)
July 16-June 17	41	4.25	4403.82
July 17-June 2018	30	3.44207	6227.517
July 2018-March 2019	16	2.706	3226.52
Total	87	10.4	13858

PFIP

Function	Surveys conducted	Savings in MVA	Reduction in CO2 (MT CO2/annum)
July 16-June 17	993	94	40804.3
July 17-June 2018	865	71.95	84225
July 2018-March 2019	623	53	46825
Total	2481	218.95	171,854.30

Outreach Awareness

Function	consumers tapped	Load optimised	Reduction in CO2 (MT CO2/annum)
July 16-June 17	77424	4.64 MW	4403.82
July 17-June 2018	156192	9.3 MW	6227.517
July 2018-March 2019	309552	18.5MW	3226.52
Total	543,168	13.94MW	13858

Renewable Solar Project

Function	Consumer Tapped	Savings	Reduction in CO2
On Grid	21	2500 kW	1711 MT
Off Grid	5 installation	44.5 kW	30.4 MT



Company-wide Implementation of ISO 50001 Energy Management System

The ISO 50001 standard is a comprehensive Energy Management framework to achieve optimal energy performance under a continuous improvement plan. KE's implementation of this system will allow the utility to further integrate energy management, efficiency and conservation into its overall operations and reduce greenhouse gas emissions and other related environmental impact.

The ISO certification also reiterates KE's commitment to global Sustainable Development Goals and our commitment to combat climate change. Adhering to this standard will help KE be ranked amongst the top utilities in the world.

RENEWABLE ENERGY



Solar IPPs

In an effort to diversify its fuel mix towards clean energy, KE has entered into two, 25-year energy Purchase Agreements (EPA) with independent power producers (IPPs), which would add 100 MW of solar PV based renewable energy to KE's system.

Oursun Solar

EPA for 50 MW was signed with Oursun Solar in June 2017. The project was commissioned in November 2018 for exclusive power supply to KE. This is the first 50 MW of renewable energy in KE's system.

Gharo Solar

KE entered into an EPA with Gharo Solar Power Company (GSPL) in September 2018 for a 50 MW Solar power project which is expected to be commissioned by December 2019. This EPA is based on the new cheaper solar tariffs that are now prevalent in the country, and hence it will contribute towards the provision of clean and affordable energy to KE's consumers.



Wind Independent Power Plant (IPP)

KE is currently in active discussions with a 50 MW wind IPP which has already completed the feasibility study. This project aims to provide KE with its first wind power project via long-term EPA. Discussions on the tariff proposal and EPA are currently in progress.

WWF Nordic Climate Fund Project

KE partnered with WWF under the Nordic Climate Facility to provide solar-home lighting solutions to households in off-grid areas of the city.

In the first phase of the project, basic electricity supply has been provided to 1,745 households with the objective to scale up to 10,000 households in Karachi and its suburbs.

Other Renewable Projects

KE is also evaluating another 300 MWs of renewable projects to further increase the share of renewable energy based on solar, wind and biogas.





KE Head Office Solar Project

After completely transforming its Head Office lighting load from conventional to LED lighting, thereby reducing the load by more than 75%, KE moved towards a solar rooftop. In its first phase, a 25kW grid tied solar pilot project was installed on the rooftop of the main Head Office building.

Owing to its success, a 265KW solar carport was built, increasing the total of grid tied solar projects across KE to 290kW. Working on full efficiency, this project can power roughly half of the entire building load of Head Office.

As a result of this initiative, KE mitigates an estimated 150,000 kg of CO₂ emissions annually, which is equivalent to planting 3,500 trees.



“The global energy sector faces complex, interlinked challenges – technological, environmental, demographic – and KE is ready to meet them head-on to help provide a **sustainable future** for our stakeholders.”

Muhammad Aamir Ghaziani
Chief Financial Officer

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