K-Electric Limited Investor Presentation

November 2019

Pakistan Power Sector

Strategic Importance of Karachi

Reforms Underway

KE's Brief History & Overview

Operational & Financial Performance

Multi-Year Tariff

Future Plans

Key Challenges

Pakistan Power Sector – State of the Industry



Despite capacity additions of over 10,000 MW of power generation in the last 5 years, overall energy planning remained fragmented across the energy value chain, with little focus on improving the energy mix and upgrading Transmission and Distribution capacity

AT&C Loss Comparison

Highest AT&C Losses in the region – need for technological and process improvements



Electrification Rate



26% of the country's population does not have access to grid

Per Capita Consumption (kWh)



Need for continued investments

Potential for USD 80 Billion of future investments to bring operational improvements along with sector reforms – out of these at least 50% are required in Transmission and Distribution upgrades

• Pakistani power sector including generation, transmission and upgradation has over USD 80 Billion investment opportunities and foreign direct investment was pouring as multiple companies have shown their interest to invest"

Omar Ayub, Minister for Energy, Government of Pakistan

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Strategic Importance of Karachi



The city of Karachi is essential to Pakistan's economy and drives much of the country's economic growth. As the city's sole electricity provider, KE is of strategic importance to the municipality and the country

Karachi's Importance to Pakistan

- Karachi is the commercial hub and gateway of Pakistan accounts for c. 20% of the country's GDP
- Home to Pakistan Stock Exchange, making it the financial centre of Pakistan
- c. 40% of large-scale manufacturing employment is in Karachi
- Population is expected to grow at a CAGR of c. 2.5% in the next 5 years
- Following government initiatives among others would lead to further increase in industrial and commercial activity, resulting in increased power demand
 - Setting up of Special Economic Zone (SEZ) in Dhabeji region
 - Development of National Industrial Park near Port Qasim, Karachi

Rest of Pakistan vs. Karachi – Growth in Peak Demand¹ (MW)





Karachi's Contribution to Pakistan's Economy

Source: Asian Development Bank & United Nations population estimates and projections of major Urban Agglomerations, World Bank, News Reports, NEPRA State of Industry Report 1. Peak demand for PEPCO area in 2019 is not available

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Pakistan Power Sector – Reforms Underway



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Policy reforms are underway to address key power sector issues including circular debt and other structural weaknesses – improvement of ecosystem and system performance will definitely fuel economic growth led by domestic and export-led businesses

Challenges	Measures	Positive Outlook	
	Sustainable Capacity	GoP's target to erase	
Circular Debt	Shift to low cost sources (coal, hydel, renewables, etc)	circular debt by	
	 Targeted fuel mix by 2040: Hydel (40%), Renewables (16%) and Local Coal (25%) 	end of 2020	
	Attract investment in on-grid and off-grid renewables for greater access		
Significant increase in Capacity Payments	Integrated planning to improve demand forecasting which will help avoid capacity payments for idle capacity	Addition of low-cost generation	
Tariff Subsidies	Structural Changes		
	Planned privatization of state-owned distribution companies	Privatization of state- owned DISCOs	
	Regulatory changes including action against power theft		
	Gradual phasing out of subsidies through increase in consumer-end tariff		
Link Loopoo 9 Noodfar	Competitive bidding	Improved Operational Efficiency	
High Losses & Need for Technological Upgrade	Opening up of markets allowing wider access to distribution companies	Greater Transparency and Accountability	
	Efficiency Improvements		
Weak Governance	Introduction of technology (Aerial Bundled Cabling, Smart Meters, etc)	Reduction in power outages and improved	
of ex-WAPDA Entities	Minimize losses through upgrading T&D network and improve recovery	service levels	

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Business Overview



As the only vertically integrated power supply company in Pakistan, KE has a robust network to ensure sustainable and reliable power supply to Karachi and its adjoining areas



1. Residential includes Domestic, Agriculture, Street light and General Services Note: Public sector consumers account for c. 9% of annual units billed

Commercial²

2. Commercial includes Bulk Supply consumers

Commercial²

Peak Demand (MW)

Brief History & Overview



Incorporated in 1913, KE is the only power utility company having presence across the entire energy value chain, and has a customer base of more than 2.8 Million



KE's Turnaround – A Success Story



Privatized in 2005, KE's turnaround success presents a classic example of targeted and well-timed investments transforming a cash-bleed, loss making entity into a profit-making utility driven by significant investments and operational improvements



- To keep KE's operations afloat, annual average operational subsidy of c. PKR 9.5 Billion had to be provided by GoP during FY 2003 to FY 2005, which was not required post privatization – losses borne by KE's private investors
- KE's Privatization & Turnaround – Setting a precedent for the Power Sector
- Evident from the performance of XWDISCOs, had KE not been privatized, the company would have continued on a loss-making trajectory, burdening the GoP in the form of operational subsidy – KE's improvement in AT&C losses of 15.7% points (Annual impact of c. PKR 50 Billion²)
- XWDISCOs reported a cumulative loss of c. PKR 207 Billion from 2013 to 2016 – Eight out of ten state-owned distribution companies reported losses in FY 16 and are heavily dependent upon GoP support

Operational Improvements outperforming state-owned DISCOs

Significant Loss Reduction by KE, whereas losses of XWDISCOs have increased





- In view of the above significant improvements shown by KE post privatization, NEPRA has also recommended the GoP to consider privatization of XWDISCOs, encouraging private investments
- This would improve the governance and efficiency of XWDISCOs, make them financially self-sufficient, thus reduce the burden on national exchequer and enable the sector to be financially sustainable

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Operational Performance since 2009



Through investments of over USD 2.4 Billion across the value chain during FY 09 to FY 19¹, KE's management focused on enhancing fleet efficiency, reducing T&D losses and improving operational processes to unlock value

Investments across the value chain since 2009



Investments made Across the Value Chain in Last 3 Years



Over the last three years, various initiatives were taken across the energy value chain to enhance capacity, improve reliability of the network along with targeted loss reduction

Capex FY 17 – FY 19¹ (USD Million) Over USD 960 Million invested across the value chain in the last 3 years 401 338 181 6 eneration Transmission Distribution Others

Operational Improvements

- Overhaul and rehabilitation works resulted in **increase in average Gross Dependable Capacity (GDC) by c. 70 MW** as compared to FY 16
- Significant progress was made on KE's over USD 450 Million TP 1000 project to overcome transmission constraints and facilitate sent-out growth
- T&D losses reduced by over 3% points from FY 16 levels along with c. 4% points improvement in overall recovery levels
- Recovery drives / campaigns to engage defaulters such as 'Current Bill ka Waada'
- Technological advancements including AMI Infrastructure, launch of KE Live App

Capacity Addition & System Improvements in last 3 years

Power Supply added to KE's System in last 3 Years				
National Grid	Oursun	SNPC	FPCL	
(150 MW)	(50 MW)	(101 MW)	(52 MW)	
June, 2019	Nov, 2018	Jan, 2018	May, 2017	



Operational Performance – Generation, Transmission & Distribution



Driven by focused investments, the company has continued to improve on the operational parameters – strong operational performance in the first quarter of FY 20 to further the operational improvements of previous years



Generation Fleet Efficiency (%)



Rolling Average T&D Losses (%)



Recovery Ratio (%)



Financial Performance



Despite change in tariff, the company continued to perform on the operational front which translated into improved financial performance in FY 18

Financial Highlights

Change in Tariff Level & Structure

- Change in tariff structure and levels impacted FY 17 profitability as compared to FY 16
- KE expects a positive outcome to its Appellate Tribunal case on key MYT issues

Continuous Investments and Improved **Operational Performance in FY 18**

Driven by operational improvements ٠ including sent-out and T&D losses, FY 18 improvements in financial marked performance as compared to FY 17

Sustained Financial Outlook

Continued and sustained operational improvements in future through investments in all core functions will translate into improved financial results









Key Financing Initiatives



Investors have shown continued trust and confidence in the company's fundamentals, enabling KE to make the planned investments on accelerated basis and further the positive trajectory of operational improvements

Key Financing Initiatives



Issuance of PKR 10 Billion Islamic Commercial Paper – Pakistan's largest privately placed Shariah-compliant Islamic Commercial Paper



K-Electric signs US\$ 50 Million loan agreement with Standard Chartered supported by GuarantCo for upgrading power infrastructure in Karachi

USD 50 Million funding arranged from Guarantco. for projects in Generation, Transmission and Distribution – will enable KE to capitalize upon the growth potential VIS Credit Rating Company Limited

"VIS Credit Rating Company Limited (VIS) has assigned preliminary rating of AA+ (Double A Plus) to K-Electric Limited's (KE) proposed Rs. 25 billion Sukuk. KE's long-term entity and Sukuk rating (Rs. 22b Sukuk) have been reaffirmed at AA (Double A) and AA+ (Double A Plus), respectively. The Company's short-term ratings have been upgraded from A-1 (Single A One) to 'A-1+' (Sindh A-One Plus)....Rating assigned to KE's outstanding Islamic Commercial Paper (ICP-A) has also been upgraded to 'A-1+' (A-One Plus)"

Press Release, VIS Credit Rating Company Limited, October 14, 2019

Improved Credit Rating following notification of KE's MYT and on the back of improved operational and financial outlook of the company



Syndicate Financing of PKR 25 Billion Besides TP – 1000 project, the proceeds of this loan are also being utilized to fund ongoing Distribution projects

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Determined MYT



As compared to KE's Previous MYT, the Determined MYT presents a different, de-risked, Return on RAB structure with additional upsides for KE to unlock value and further its improvement trajectory

Opportunities to Unlock Value under the Determined MYT

As highlighted below, the Determined MYT presents several upsides for KE to capitalize upon. KE also remains confident of a positive outcome to its Appellate Tribunal case on key MYT issues including application of notional Debt to Equity ratio by NEPRA while calculating the allowed returns



Return on RAB structure – allows for a long-term, de-risked construct since KE's RAB will continue to increase as key projects come online and the structure is inline with other power sector entities



Operational Efficiencies – outperforming NEPRA benchmarks for T&D loss, sent-out growth and beating NEPRA projected O&M costs



Allowance of Actual write-offs – improved recovery which combined with allowed write-offs will minimize KE's recovery gap



Investment Flexibility – investments in new generation projects (other than BQPS – III), subject to NEPRA's approval



Dollarized returns across the value chain have been allowed



Removal of "-X" Factor from O&M Indexation for Generation – similar to IPPs



Mid-Term Review Mechanism in Tariff – to re-assess certain assumptions including investments, exchange rates and working capital



Tax / WWF / WPPF allowed as pass-through items

There are numerous opportunities to unlock value under the long-term de-risked return on RAB structure while retaining KE's integrated nature of operations

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Initiatives across the Energy Value Chain



Targeted investments of c. USD 3 Billion in all core functions in the next four years would enable KE to unlock key value drivers under the MYT along with benefitting consumers and the economy at large

Investments across the Value Chain

Generation

- Capacity addition of c. 3,000 MW key projects include:
- 900 MW RLNG Plant the project would significantly improve KE's overall fleet efficiency
- 700 MW Coal IPP (equity project)
- c. 1,000 MW through external IPPs including 300 MW of renewables
- Planned projects would also diversify KE's fuel mix

Transmission

- Capacity enhancement and improved network reliability through two key projects:
- TP 1000: addition of 1,000 MVAs
 - 4 grid stations and 22 power trafos have been added under TP – 1000 project
- TP 2: to further improve system / network reliability and facilitate sent-out growth

Distribution

- Capacity enhancement through addition of **300 feeders** and **over 5,000 transformers**
- Conversion of 15,000 PMTs onto ABC by 2023 significant reduction in losses
- Targeted recovery drives / campaigns to engage defaulting consumers and improve recovery levels
- Simplified New Connection process expected to add over 1,400 MW of new connections in the next four years
- Safety enhancement initiatives

Investments of USD 3 Billion in the next four years to capitalize upon growth potential and provide consumer value

Improved Network Reliability Reduction in Load-shed Process Automation and Improved Service Levels

Enhanced Network Safety Industrial Connections fueling economic growth

Potential for Further Value Improvement through a Strategic Investor



In addition to KE's robust investment plan of c. USD 3 Billion across the energy value chain, an aggressive, strategic investor, Capex plan would further improve Karachi's power infrastructure

Strategic Investment – Potential Impact

- An aggressive investment plan, would be an opportunity for Karachi's power sector to reach new levels of excellence would further allow KE to remain committed to ensure safe, reliable and uninterrupted supply of power for the citizens of Karachi through:
 - Capacity additions across the power value chain
 - Reduced load-shed

- Improved network reliability
- Provision of N 1 supply for low loss, strategic and industrial consumers
- Shanghai Electric Power (SEP) signed a Definitive Agreement to acquire 66.4% stake in the company in October 2016, subject to receipt of government and regulatory approvals and has presented such a plan to the GoP
- SEP is one of the largest electric power companies in Shanghai and is committed to developing the power sector worldwide through operations in over 20 countries outside of China
- SEP is a subsidiary of the State Power Investment Corporation of China (SPIC), one of China's big 4 generation companies with installed capacity of over 142,700 MW and also has operations in over 43 countries globally
- SPIC is an active participant in the development of Pakistan's power sector and is a key CPEC investor involved in a wide variety of projects



An aggressive investment plan along with KE's planned initiatives would result in greater positive impact for KE's customers and Karachi, while also facilitating economic growth in Karachi and Pakistan

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Key Challenges – Receivables from Government Entities and Departments



Delays in release of payments from relevant authorities and growing receivables from government entities impacts the working capital position of the company for which continuous engagement with relevant stakeholders is being done

Receivables & Payables – Government Entities / Departments

Receivables from Government Entitie	s PKR Billion		Payables to Government Entities	PKR Billion		
Tariff Differential Claims ¹	149		NTDC / CPPA – G	97		Net Receivable to
KWSB "Strategic Customer"	32	_	SSGC	14	_	KE
Government of Sindh (GoS)	19					c. PKR 98
Other Federal & Provincial Entities	14		Other Federal & Provincial Entities	6		Billion
Total Receivables	214		Total Payables	117		

KE seeks a fair and equitable resolution to the issue of receivables and payables

- KE is in continuous engagement with relevant stakeholders for a fair and expedient resolution to the issue of receivables and payables, including any mark-up
- Delays in release of TDC and energy dues of strategic customers including KWSB by GoP resulted in consequential delays in payments to NTDC / CPPA G and SSGC
- Monthly payments are being received against KWSB dues since January 2016. Further, execution of a Power Supply Agreement with GoS guarantee around KWSB dues is in advanced stages
- Power Purchase Agreement with NTDC provides for a set-off mechanism through which KE's payables to NTDC / CPPA G are to be off-set with TDC receivables KE has net TDC receivables of c. PKR 52 Billion from the GoP
- GoP is considering revision in consumer-end tariff which would reduce accumulation in subsidy claims
- On the disputed mark-up, GoP is a party on both sides (receivables & payables) establishes mutuality of obligations and accordingly, settlement of outstanding dues, including any mark-up, shall be done on net basis

Other Challenges



The management is confident of the strategies put in place to mitigate other key challenges as highlighted below

Challenges	Description	Mitigating Strategy
Demand-Supply Gap	 Delayed finalization of MYT has resulted in consequential delays in execution of planned generation projects 	 Planned 900 MW and 700 MW projects being pursued on fas track basis Engagement with GoP for additional supply from the National Grid to manage the growing power demand
City Infrastructure and External Factors impacting Provision of Safe Power Supply	 Encroachments and illegal settlements hinders access to certain areas Theft of earthing / grounding equipment Tampering with KE's network by TV cable / internet cable operators poses a safety hazard Right of Way ("RoW") impact timely execution of projects 	 Continuous engagement with local administration / authorities on kunda removal drives / tampering with network / Right of Way issues Revalidation of grounding / earthing of HT / LT poles and change in specification of earthing / grounding material to avoid theft
Consistency in Government / Regulatory Policies	Consistency in regulatory landscape and government policies to ensure that interest of all stakeholders is balanced	 Engagement at Government level and with the regulator to ensure certainty in regulatory and policy matters, enabling a pro-investment environment

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The Journey Continues



Capitalizing on the ongoing projects and with the continued investments, KE would continue to strive, improving the lives of people of Karachi and bringing economic prosperity in the country

Potential Impact							
	Capacity Additions	 Swift capacity additions and ability to provide new connections, particularly to industrial consumers on the back of increased T&D capacity 	Growth 8 Productivi				
Ш	Operational Efficiency	 System reliability and process improvements Reduced load-shed 	Socio-Econo Improveme	· · · · · · · · · · · · · · · · · · ·			
5	Dollarized Returns	 Accelerated Capex and dollarized returns across the value chain 	Enhanced Safety	 Public Accident Prevention Plan focusing on pole grounding – enhancing overall safety levels 			

Aligned with the mission of brightening lives by building the capacity to deliver uninterrupted, safe and affordable power to Karachiites, KE will continue to make investments across the value chain, enabling the Company to improve operationally whilst progressing on the value creation curve through innovation and technological advancements

Thank You



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