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National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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No. NEPRA/TRF-362/K-Electric-2016/10232-10234
July 5, 2018

Subject: **Decision of the Authority in the matter of Reconsideration Request filed by the Federal Government regarding Multi-Year Tariff (MYT) Petition of K-Electric Ltd. for the period commencing from July 1, 2016 to June 30, 2023 [Case # NEPRA/TRF-362/K-Electric-2016]**

Dear Sir,

Please find enclosed herewith the subject decision of the Authority along with Annex-I, II, III, IV, V, VI & VII (89 pages) in the matter of Reconsideration Request filed by the Federal Government regarding Multi-Year Tariff (MYT) Petition of K-Electric Ltd. for the period commencing from July 1, 2016 to June 30, 2023.

2. The subject Decision of the Authority is being intimated to the Federal Government for the purpose of notification in the official Gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

3. The Order part along with Annex-I, II, III, IV, V, VI & VII of the Authority's Decision is to be notified in the Official Gazette.

Enclosure: As above

05 07 18
(Syed Safeer Hussain)

Secretary
Ministry of Energy (Power Division)
'A' Block, Pak Secretariat
Islamabad

CC:
1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

National Electric Power Regulatory Authority

(NEPRA)

DECISION OF THE AUTHORITY IN THE MATTER OF RECONSIDERATION REQUEST FILED BY THE FEDERAL GOVERNMENT REGARDING MULTI-YEAR TARIFF (MYT) PETITION OF

K-ELECTRIC LIMITED

UNDER

NEPRA TARIFF (STANDARDS AND PROCEDURE) RULES - 1998

ISLAMABAD

5th JULY , 2018

The Authority, in exercise of the powers conferred on it under Section 7(3) (a) read with Section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, Tariff Standards and Procedure Rules, 1998 and all other powers enabling it in this behalf, and after taking into consideration all the submissions made by the parties, issues raised, evidence/record produced during hearings, and all other relevant material, hereby issues this decision.

AUTHORITY

(Himayat Ullah Khan)
Member

(Rehmatullah)
Member

(Saif Ullah Chattha)
Member

(Syed Masood ul Hassan Naqvi)
Vice Chairman

(Brig. (R) Tariq Saddozai)
Chairman

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DECISION IN THE MATTER OF RECONSIDERATION REQUEST FILED BY THE FEDERAL GOVERNMENT PERTAINING TO THE TARIFF DETERMINATION DATED MARCH 20, 2017 AND REVIEW DECISION DATED OCTOBER 09, 2017 WITH RESPECT MULTI YEAR TARIFF (MYT) OF K-ELECTRIC LIMITED EFFECTIVE FROM JULY 1, 2016 to JUNE 30, 2023

1. K-Electric Limited (herein referred to as "**K-Electric** or the **Company** or **KE**"), formerly Karachi Electric Supply Company Limited ("**KESCL**") was initially incorporated as a limited liability Company. The Company was later listed on Pakistan Stock Exchange.

2. K-Electric is the only vertically integrated utility in Pakistan and is principally engaged in the generation, transmission and distribution of electrical energy to industrial and other consumers within its licensed area of over 6,500 square kilometers, comprising of over 2.4 million customers in Karachi and in the nearby towns of Dhabeji & Gharo in Sindh and Hub Uthal, Vindar and Bela in Balochistan.

3. The first Multi-Year Tariff (MYT) to K-Electric was awarded by the Authority vide its tariff determination dated September 10, 2002, for a period of seven years. This tariff was to be applicable from the date of privatization of K-Electric. Owing to high losses and other operational challenges K-Electric was privatized in 2005. Accordingly as per the Implementation Agreement (IA) signed between GoP and K-Electric, dated November 14, 2005the MYT became applicable from November 2005 to November 2012.

4. This MYT awarded to K-Electric was incentive based tariff wherein K-Electric was incentivized to earn profits by bringing efficiency and through making investments in its generation, transmission and distribution segments. To cap any excessive profits and to extend relief to the consumers, a Claw Back Mechanism was also made part of that MYT determination through which K-Electric was required to share its yearly profit above 12% with consumers on the allowed Regulatory Asset Base (RAB).

5. Subsequently in 2009, major shareholding of K-Electric was taken over by the Abraaj Group through KES Power Limited (Holding Company). As a result thereof an Amended Implementation Agreement (AIA) was signed between GoP and K-Electric, on April 13, 2009, whereby the Tariff Control period of 7 years was revised and made applicable from the Revised Closing Date (i.e. date of signing the referred AIA).

6. Consequent upon signing of the AIA, K-Electric filed a tariff Petition on April 22, 2009, with the Authority, for an increase in the base tariff, modification in the adjustment mechanism, terms & conditions of supply and security deposit rates etc. While processing the KE's then request, the Authority considered following three options;

   a) The Authority strictly adhere to its Previous Determination and KESCL (now KE) be asked to file a fresh Petition in the year 2012 i.e. after expiry of seven years tariff control period.

   b) KESCL's multi-year tariff is re-determined on the basis of fresh assessment of each

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b) *KESCL's multi-year tariff is re-determined on the basis of fresh assessment of each component of tariff and fresh multi-year tariff starting from the date of signing of revised IA (April 13, 2009) is set for the next 7 years control period, while disregarding the Previous Determination.*

c) *KESCL's Previous Determination is modified wherever justified based on merits of the case without disturbing the essence and spirit of the Previous Determination.*

7. After deliberation and processing, the option "c" above was considered and accordingly the Authority decided the petition of K-Electric vide its determination dated December 23, 2009. Certain amendments were also made in the adjustment mechanism and an increase of Rs.0.15 per kWh was allowed on account of the operations and maintenance component of Distribution segment. The time period of MYT was extended for next seven years to remain applicable from July 01, 2009 till June 30, 2016. The brief excerpts from the referred tariff determination of December 2009 under which option 'c' was allowed by the Authority is as under:

    12.5 GoP, in the recent past, realizing KESCL's genuine financial problems came to its rescue and waived off/set aside about Rs. 49.0 billion which was payable by KESCL to NTDC on account of power purchases. It also signed an amended IA with KESCL's new investors thereby extending the period of agreement for another seven years from the date of signing of an amended IA on April 13, 2009. GoP in a way acknowledged the importance and need to keep KESCL a going concern so that it continues to provide satisfactory service to its consumers.

    12.7 In view of the above, the Authority considers the third option to be the only pragmatic option whereby KESCL's tariff can be adjusted/trued up after analyzing thoroughly the requested increase in tariff by KESCL for each component based on justification and merits of the case. Towards this end, the Authority shall ensure that KESCL gets the bare minimum increase in tariff wherever necessary and justified while remaining within the main framework and spirit of the Previous Determination for KESCL.

8. Under the referred tariff control period (2009-2016) KE turned into a profit making entity while the performance regulatory benchmarks were not achieved. The main reason attributable to these profits was the efficiency gains of the generation segment that were allowed in that MYT to be retained by KE. The other segments did not show the required level of improvement as was desired under the previous MYT.

9. The previous MYT expired on June, 30, 2016 and accordingly, K-Electric Limited filed its Integrated Multi Year Tariff ("**I-MYT**") petition on March 31, 2016, in accordance with Rule 3 (1) of the NEPRA Tariff (Standards and Procedure) Rules, 1998, requesting determination of Multi-Year Tariff ("MYT") for a period of ten (10) years commencing from July 01, 2016 to June 30, 2026. In the tariff petition, K-Electric requested for

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continuation of the existing MYT for a further period of ten (10) years, with an increase of around Rs.0.66 per kWh in the tariff i.e. from existing tariff of around Rs.15.50 per kWh to Rs.16.10 per kWh. The said petition was decided by the Authority, vide determination No.NEPRA/TRF-362/K-Electric- 2016/3760-3762 dated March 20, 2017, with a MYT awarded to KE for a tariff control period of seven (7) years (hereinafter referred to as the "**Determination**") K-Electric was allowed an overall tariff of Rs.12.07 per kWh w.e.f. July 01, 2016 for the 7 years control period. The same was communicated to the Federal Government, under Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (hereinafter referred to as "**NEPRA Act**"), for notification in the official Gazette, however, the same has not been notified till the date of issuance of this decision.

10. K-Electric, being aggrieved with the Determination, filed a Motion for Leave for Review ("**MLR**"), wherein certain issues were raised including but not limited to heat rates and auxiliary consumption, rate of return, O&M cost, load shedding assumption, T&D Losses & recovery and investments etc.

11. MLR was decided by the Authority vide its decision dated October 09, 2017 (hereinafter referred to as the "**Decision**") wherein, K-Electric's tariff was enhanced by around Rs 0.70 per kWh from Rs.12.0692 per kWh to Rs.12.7706 per kWh on account of revised investment plan, load shedding assumptions, T&D losses, heat rates, cost of debt and load growth. The same was also intimated to the Federal Government, under Section 31(4) of the NEPRA Act, for notification in the official Gazette, however, the same has also not been notified till the date of issuance of this decision.

12. Subsequently, K-Electric, vide its letter No KE/BPR/MoE/2017/185 dated October 12, 2017, requested the Ministry of Energy ("**MOE**") (Power Division), Government of Pakistan ("**The Federal Government**") to file reconsideration request with NEPRA to reconsider anew the determined MYT, pursuant to proviso to subsection 4 of Section 31 of NEPRA Act 1997 read with sub-rule 12 of rule 16 of the NEPRA Tariff Standards & Procedure Rules 1998, in the greater public interest and to ensure KE's sustainability and further investment in infrastructure to meet the primary obligation of providing smooth and reliable supply to its consumers.

13. The Federal Government, (hereinafter referred as the "**Petitioner**") acting on KE's letter, filed the reconsideration request under Section 31(4) of the NEPRA Act, vide letter No.PIII-03(2)/2009 dated October 26, 2017.

14. The Petitioner did not specifically comment on any of the issues raised by K-Electric in its letter dated October 12, 2017, however, filed reconsideration request by forwarding the letter of K-Electric and the issues raised by the K-Electric were also submitted before NEPRA. It further stated that "*we have reviewed the contents of the enclosed letter and feel that it is important that the Authority ought to reconsider its earlier determination to*

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ensure that the consumer interest in terms of continuous and efficient service delivery is maintained." (emphasis added)

15. In the letter forwarded by the Federal Government for reconsideration, KE primarily agitated the following four matters in its letter of October 12, 2017 addressed to the Federal Government and expressed its views; as summarized hereunder ;

a) **Recovery loss:**

KE submitted that significant essential costs such as recovery loss have not been appropriately accounted for in the determined MYT. Allowing bad debt allowance of just 1.69%, and not relying on actual recovery of 87.6%, will severely disrupt KE's future cash flows and will lead to KE's insolvency. KE asserted that NEPRA should recognize recovery as a performance measure in the base tariff and allow a realistic, improved, trajectory such that the tariff remains cost reflective and averts KE's insolvency.

b) **Performance based tariff**

KE requested that a performance based tariff structure, as implemented in previous MYT determinations for KE, should be allowed, wherein the onus to invest and make return rests with KE. A rigid investment plan does not provide KE with any flexibility to address its needs and investment plans. Further, NEPRA should set minimum investment requirements and ensure that KE adheres to these targets. Going forward, if generation efficiencies improve, KE should be allowed to retain the benefits of efficiency gains above those incorporated in the allowed MYT, while ensuring that such benefits are shared in form of an agreed claw back mechanism.

c) **Assessment of Regulatory Asset Base (RAB).**

KE submitted that the assumption of RAB on a prescribed value/cost methodology, as opposed to a capital employed (debt + equity) methodology, has resulted in a significantly reduced RAB for KE. It was emphasized that this negatively impacts the base tariff and KE's ability to execute business plans. Further, KE has invested significant amount of equity to compensate past accumulated losses and not paid out any dividends. Furthermore, KE also requested that the Return on Equity (ROE) in transmission and distribution business should be indexed with USD.

d) **Debt to Equity Ratio**

The Authority has determined tariff based on a notional debt equity ratio of 70:30, rather than on actual figures. KE provided the justification that being a 100 year old company, it cannot have such a ratio. Further, KE became profitable for the first time in 17 years in the year 2012, prior to which KE had to rely on equity finance due to difficulties in raising debt. As such, the debt equity ratio needs to be applied on actual basis.

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16. The Authority, in terms of sub-section (4) of section 31 of NEPRA Act read with sub-rule (12) of rule 16 of NEPRA (Tariff standard and Procedure) Rules, 1998, admitted the reconsideration request on November 08, 2017.

17. The Authority in order to meet the ends of natural justice decided to provide an opportunity of hearing to the Federal Government in this regard, which was held on December 05, 2017 at NEPRA Tower Islamabad.

18. Based on the submissions made by K-Electric in its letter addressed to the Federal Government and the stance taken by the Federal Government in its reconsideration request, following issues were framed to be addressed during the hearing;

   i. In the matter of K-Electric as well as XWDISCOs, the Authority has determined the tariff based on recovery targets with actual write-offs duly allowed. Whether this request of the Government to consider recovery loss of K-Electric, based on recoveries of 87.6% is justified and in the interest of consumer?

   ii. Considering spirit of privatization of K-Electric (KESC) and earlier correspondence dated 26th Jan'17 from Secretary MoWP, whether this reconsideration request for a performance based tariff structure similar to initial Multi-Year-Tariff (2002) is justified wherein efficiency gains in power generation as well as in Transmission and Distribution are to be retained by K-Electric?

   iii. In the matter of all XWDISCOs, WAPDA Hydel and NTDCL, the Authority has allowed RAB based on the written down value of fixed assets. Whether this request of the Government to work out the RAB of K-Electric based on capital employed (sum of Equity + Debt) is justified?

   iv. The tariff of IPPs, GENCOs, XWDISCOs, NTDCL are all based on debt: equity ratio wherein any equity over 30% is considered as debt. Whether this request of Government to calculate K-Electric's tariff based on actual debt: equity ratio with equity considered over the allowed threshold is justified?

   v. The Authority has already allowed K-Electric a comparable return for its Generation, Transmission and Distribution Businesses. Whether this request of the Government to consider higher return to K-Electric with US$ indexation also allowed on transmission and distribution business is justified?

   vi. Whether the determined MYT have any significant adverse implications on KE's consumers?

   vii. Whether the determined MYT will turn KE into loss making entity with significant cash shortfall over the next seven years?

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viii. Whether the determined MYT will make the KE's operations unviable, un-bankable, and unsustainable and will impair KE's ability to undertake investments in generation, transmission and distribution?

19. Individual notices of hearing were sent to the Federal Government and all the parties to the proceedings, wherein issues framed for hearing were also communicated.

20. The Federal Government vide its letter dated December 04, 2017, presented to the Authority on December 05, 2017 on the hearing date submitted that;

"...the issues framed appear to be requesting the Federal Government to make a determination regarding the balance between the interest of the consumers and K-Electric's ability to continue as going concern with the capacity to providing adequate service delivery, which is clearly the statutory mandate of the Authority. As policy makers however, the Federal Government general views is that the Authority should ensure conducive investment environment to encourage future privatization as well as increase the private sector footprint in the power sector...the stance of the K-Electric may be reheard and <u>the Authority may in its statutory discretion make a determination keeping in view the parameters of tariff settings as stated in the Act and the rules and regulations made thereunder</u>..." (Emphasis added)

21. Written comments on the reconsideration request filed were also received from the following interveners and commentators;

<u>Interveners:</u>

- ✓ Mr. Abu Bakar Usman
- ✓ Mr. Arif Bilwani
- ✓ Mr. Jamat e Islami
- ✓ Karachi Chamber of Commerce and Industry
- ✓ K-Electric Consumer Forum
- ✓ Whistle Blower Pakistan

<u>Commentators:</u>

- ✓ Aneel Mumtaz
- ✓ Government of Sindh (Energy Department)
- ✓ Habib Bank Limited (HBL)
- ✓ Layton Rahmatulla Benevolent Fund (LRBT)
- ✓ Overseas Investors Chamber of Commerce and Industries (OICCI)
- ✓ Sindh Institute of Urology and Transplantation (SIUT)

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- ✓ The Citizen Foundation
- ✓ The Federation of Pakistan Commerce and Industries
- ✓ The Pakistan Business Council
- ✓ United Bank Limited (UBL)

Others

- ✓ Clean Energy Service and Solution
- ✓ Office of the Union Committee
- ✓ Union Committee Administration
- ✓ Al Meezan

22. **Proceedings of the Hearing**

22.1 The hearing was held as per the schedule i.e. December 05, 2017 at NEPRA Tower Islamabad, which was attended by the representatives from the Federal Government, K-Electric and various parties to the proceedings. The Federal Government was represented by Mr. Zargham Ishaq Khan, Joint Secretary, MoE, Power Division, whereas, KE was represented by its Technical and Financial team and its Financial Advisors i.e. M/S Price Waterhouse Coopers (PWC).

22.2 The intervener, Mr. Arif Bilwani, in his comments submitted that Federal Government acting as a post office, has forwarded the letter of K-Electric to the Authority for consideration without offering any reservation or specific points /issues detrimental to the interest of consumers.

22.3 Considering the fact that the Federal Government did not comment on any of the issues raised by K-Electric in its letter dated October 12, 2017, the Authority during the hearing, afforded representative of the Federal Government, the opportunity to respond to the issues framed for hearing and provide the Federal Government specific view point on each of these issues. The representative of the Federal Government fully supported and endorsed the viewpoint of K-Electric about all the issues raised by K-Electric in the reconsideration request.

22.4 The Federal Government/GoP during the hearing submitted that reconsideration request was filed in view of the fact that K-Electric is the only privatized entity in the country. The Federal Government is in the process of privatizing other entities and any action / determination by which the financial viability of a privatized entity is compromised in terms of its liquidity and performance as a going concern, may compromise the Federal Government initiatives for privatization of other utilities.

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Regarding the issues framed for hearing, the representative of the Federal Government submitted that the same will be presented by their adviser i.e. PWC.

22.5 Upon inquiry from the Authority for any engagement letter issued by Federal Government for engaging PWC as consultants, the representative of the Federal Government submitted that although no formal engagement letter has been issued, however, the Federal Government fully owns and endorses the view point of M/s PWC, to be presented during the hearing in this Government's reconsideration request. Upon a question during the hearing regarding approval of Cabinet for the matter presented in the hearing, the representative of the Federal Government explained that Cabinet has given the role to the extent of this tariff to the Federal Minister for Energy. He further confirmed that procedural approval that Ministry is going to present their case has been approved by the same authority. However, during hearing of the instant reconsideration request, the Federal Government endorsed KE's stance of continuation of the previous MYT regime.

22.6 The Authority, vide letter No. NEPRA/SAT-I/TRF-362/K-Electric-2016/19993 dated Dec 08, 2017, sought clarification in the matter from the Federal Government as follows;

"... to provide its comments in writing on the issues framed by the Authority and also confirm whether the Federal Government fully endorses the submission made by KE in its letter which formed the basis of the reconsideration request including KE's and consultants submissions during the hearing."

22.7 In response the Petitioner vide letter No.PIII 3(2)/2009 dated December 13, 2017, stated as below;

"... the final decision on tariff is to be taken by the regulator keeping in mind the policy objectives of the Federal Government, i.e. the tariffs determined by NEPRA should not only ensure the ability of K-Electric to provide adequate service delivery to its consumers, it should also offer a conducive investment environment to encourage future privatization as well as increase the private sector footprint in the power sector.

It is further clarified that it is for Regulator to make a final decision regarding whether the impact of the grounds of K-Electric support the Government objectives or otherwise."

22.8 However, during the hearing the representative of the GoP owned the presentation made by KE and its advisors.

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22.9 From the laid down provisions of NEPRA (Tariff) Standard and Procedure Rules 1998, it is observable that the focal point of tariff determination is protection of consumer interest alongside prudent cost recovery for licensees. Clause (i) provides for licensees to recover any and all prudently incurred costs, but only such costs that are sustained for the purposes of meeting consumer needs. Clause (ii) provides for licensees to be granted a rate of return commensurate of investments of comparable risk. The underlying motivation is sustainability of licensee services and promotion of investment in the sector, to the overarching benefit of the consumer. Clause (iii) further reiterates this point, by correlating rate of return with investments made towards increasing efficiency and improvement of service to consumers. Clause (iv) is more explicit regarding the overarching consumer-centric motif of Rule 17(3), by obligating the Authority to reward or penalize licensees on the basis of cost efficiencies (that translate to direct benefits to consumers) and quality of service to customers. In summary, Rule 17(3) ibid, which governs the principles of tariff determination, prescribe consumer interest as the foremost consideration and feature of the tariff determination process.

22.10 Apart from primary and secondary legislation, the grounds agitated by the Federal Government (being the petitioner) are also relevant. The Federal Government has sought reconsideration on the instant matter (1) to ensure adequate service delivery to K-Electric's consumers, and (2) to ensure K-Electric's ability to continue as a going concern and provide a conducive investment environment to encourage future privatization as well as increase the private sector footprint in the power sector. The Federal Government representative fully owned and endorsed the view point of K-Electric which was presented before the Authority on the date of hearing.

22.11 In consideration of the above, the instant tariff determination shall be based on the following three parameters;

a. Preservation of Consumer Interest;

b. Sustainability of supply and service to the benefit of consumers; and

c. Sustainability of KE as a public utility.

22.12 'Consumer interest' may be defined as the maximization of consumer welfare by way of competitive energy pricing, energy supply security and curtailment of monopolistic and predatory practices of utilities. Consumer interest is the Authority's primary concern when exercising its regulatory mandate, and is a statutory duty imposed on the Authority by the NEPRA Act.

22.13 Having said so, the fulfillment of the larger consumer interest lies in ensuring security of energy supply. The security correlates with a licensee's sustainability, which is based on the entity's financial ability to continue performing its obligations and services in accordance with the applicable legal regime.

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22.14 The submissions of the Federal Government and K-Electric have been carefully reviewed. The issues forwarded by the Federal Government through its reconsideration request are fundamental in deciding a tariff of any regulated utility. Based on these assumptions a utility or any stakeholder for that matter projects its earnings and cash flows to see whether the tariff given are sustainable and viable to the utility. The issues agitated by KE and Federal Government are not new to the subject of regulation and international experience. The Authority at the time of initial MYT tariff determination had also sought views and input of international experts on MYT. Likewise, for this reconsideration request the Authority has weighed the issues identified in light of NEPRA legal framework, other applicable documents, international jurisdictions and best global regulatory practices.

22.15 In view of the above, issues-wise discussion and the Authority's finding on each issues are as under. The connected issues, where applicable, have been combined together for ease of reference.

23. ***Issue#1 Whether the determined MYT will turn KE into loss making entity with significant cash shortfall over the next seven years? And;***

24. ***Issue#2 Whether the determined MYT will make the KE's operations unviable, un-bankable, and unsustainable and will impair KE's ability to undertake investments in generation, transmission and distribution?***

24.1 KE, vide their letter No KE/BPR/NEPRA/2017/216 dated December 04, 2017, and during the hearing, expressed that the determined MYT turns KE into a loss-making entity, even with taking into account the significant operational improvements i.e., (i) 4.4% average annual growth in sent-out, (ii) improvement in generation efficiency by 7.5%, and (iii) 6.9% reduction in T&D losses during the control period (FY2017 - FY2023). KE projected that the determined MYT will create losses for the Company amounting to PKR 144 Billion for the seven (7) year tariff control period (2017-2023). It was referred that KE will lose the ability to make required investments, due to lack of available profits and inability to raise debt or draw-down on already committed debt.

24.2 KE has projected a declining profitability and cash shortfall during the tariff control period. The relevant data and graph as provided by KE is reproduced hereunder –

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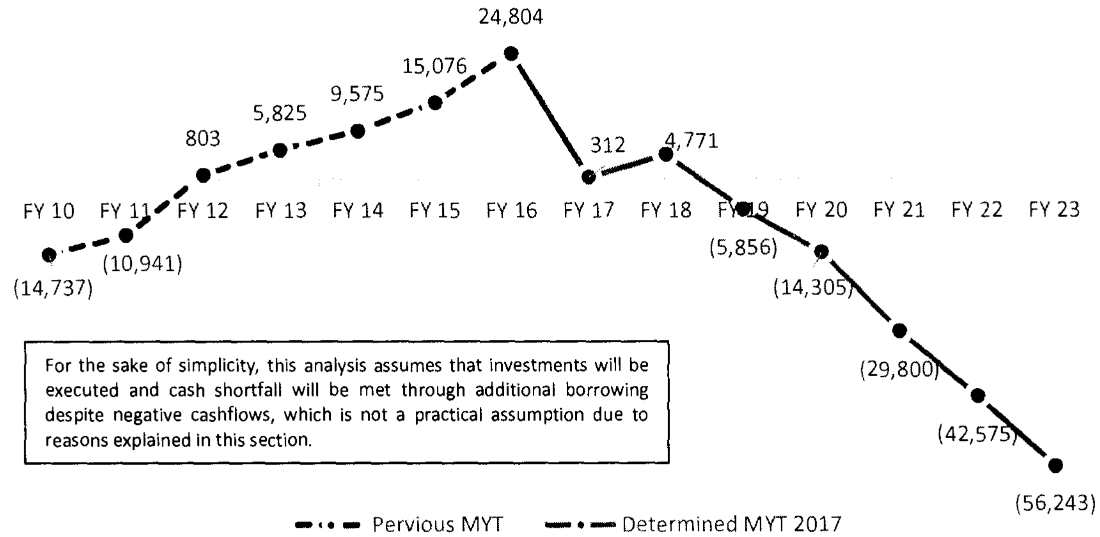

24.3 Further, KE also projected that expected cash shortfall over the tariff control period (indicated below) will make it impossible for KE to carry out planned investments worth PKR 355 billion –

PKR Billion	2017	2018	2019	2020	2021	2022	2023	Total
Annual Cash Shortfall to be Financed	(50.9)	(79.3)	(97.0)	(64.2)	(37.1)	(41.6)	(51.4)	(421.5)

24.4 The views and comments of interveners and stakeholders on these issues are summarized as follows –

a. ***Mr. Arif Bilwani (Intervener):***

- KE's argument of its inability to undertake investments in generation, transmission and distribution due to the current determination is nothing but balderdash. How was it possible for KE to arrange long term debt amounting to hundreds of millions of Dollars for setting new generating stations of KCCP, Korangi & SITE gas generation & BQPS 2 when in 2009 its equity was negative by Rs. 8,737 Billion and today it is positive (2016) Rs. 110,928 Billion.

b. ***Government of Sindh:***

- The MYT would render the KE's operations unviable and would significantly impair its ability to invest in Karachi's power infrastructure. KE's lenders have also raised serious concerns with regard to sustainability of KE's cash flows.

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c. ***Business Chambers:***

- The current tariff will have significant impact on KE's operational cash flows and profitability, which restricts the company future investment plans. Resultantly it will restrict the Company's capability to resolve the energy crisis in the city. **(Overseas Investors Chamber of Commerce and Industry).**

- Company's ability to invest has been limited by the determined MYT which is alarming, as there remains much work to be done in ensuring that power supply remains consistent for the future. Further, banks and financial institutions will also not lend any money to KE if there is doubt that the company will not be able to pay back their debts (The ***Federation of Pakistan Chamber of Commerce).***

- The reduction in tariff forces KE into a loss making position with significant cash flow issues for the next 7 years, rendering utility operations unviable and jeopardizing the planned investments. Lenders have also raised their concerns on the company's ability to honor its financial obligations **(The Pakistan Business Council).**

d. *Banks and Financial Institution:*

- The MYT could make KE's operations unviable, unsustainable resulting in cash shortfall, resulting in KE's in ability to secure long term financing for its future investments **(HBL).**
- Determined MYT leading to losses and cash shortfalls in next 7 years and will make KE operations unviable, un-bankable and un-sustainable and will impair KE's ability to make further investments in the business **(UBL).**

e. ***NGOs & Others:***

- NEPRA should take all necessary steps to ensure that gains made in terms of electricity provision in Karachi in the recent past are preserved and that KE is provided with a conducive environment to continue profitable operations ***(The Citizen Foundation)***

- The determined tariff is not cost reflective, which will push KE back into a loss-making entity. The first thing a lender will look at is the repayment capacity of the borrower and the first thing an investor looks at is return on investment. If both indicators are negative, then the likelihood of attracting capital is close to nil, which will have a direct impact on the company's ability to invest,

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bearing in mind that KE does not have GOP Guarantee backing it to raise capital like other GOP entities **(Clean Energy Service and Solution).**

24.5 In view of the data provided by KE depicting projected down turn, during the tariff control period, the financial projection's data presented by KE and underlying assumptions were analyzed to evaluate the matter.

24.6 A close review of the assumptions used by KE for the projection presented during the hearing and also in its letter No KE/BPR/NEPRA/2017/216 dated December 04, 2017 highlighted significant differences in the MYT allowed in the Determination and the assumptions used therein by KE to project its financial position during tariff control period. It has been noted that KE has used assumptions for its projections contrary to the approved MYT which has resulted in the distortion of the actual financial affairs of KE in the tariff control period. Following are broad parameters which need to be taken into account to assess and arrive at the true and fair picture of KE's financial affairs under the tariff control period –

i. Heat rates and Auxiliary Consumption
ii. Transmission & Distribution losses
iii. Operation & Maintenance Expenses
iv. Bin Qasim 4 power generation plant- Cost Rationalization
v. Provision for doubtful debt- Recovery Loss
vi. Depreciation charged on Revalued Assets
vii. Extent of Short-Term Loans required
viii. Spread used for short term loans

25. Each of the above aspect analyzed in view of KE's financial projection presented is briefly discussed below;

25.1 **Heat Rate (HR) & Auxiliary Consumption:**

25.1.1 It was observed that KE has assumed and incorporated values for financial implications of heat rate and auxiliary consumption higher than those allowed in the MYT. Since retrospective adjustment for the actual heat rate and auxiliary consumption were allowed on the basis of tests, their impact as an adverse implication should not have been incorporated in financial projections. Further, these Heat Rate & Auxiliary consumption figures have not been contested as part of the reconsideration request. Therefore, KE should not have altered and incorporated such figures for the purpose of reconsideration of tariff. By incorporating approved HR and Auxiliary consumption parameters, KE's projected loss over 7 years (of Rs. 144 billion) reduces significantly (by Rs. 21 billion). The difference between these figures is illustrated below –

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Description	Heat Rate Btu/kWh		Auxiliary %age	
	NEPRA	KE	NEPRA	KE
Bin Qasim-I	10802	11303	8.1%	9.6%
Bin Qasim-II	10650	11303	8.0%	9.6%
Bin Qasim-III	10996	11569	8.3%	9.2%
Bin Qasim-IV	10899	11569	8.2%	9.2%
Bin Qasim-V	10304	11069	7.8%	9.3%
Bin Qasim-VI	10249	11157	7.7%	9.3%
GE 220 MW	8497	8810	6.9%	8.1%
BQPS 560 MW	7991	8586	6.1%	6.5%
KGTPS-90 MW Jenbacher	8738	8884	2.5%	2.9%
SGTPS-90 MW Jenbacher	8746	8892	2.5%	2.9%

25.2 Transmission & Distribution Losses:

25.2.1 KE has incorporated higher Transmission & Distribution loss figures of 21.7% (for 2017), as opposed to 20.90% claimed by KE during its review motion for the same year, which was allowed by the Authority in the decision on MLR. Therefore there is no justification to incorporate higher losses in the financial projection. Incorporating this change with allowed benchmarks reduces losses projected by KE by a further Rs. 2.3 billion.

25.3 Operation & Maintenance Expense:

25.3.1 The Authority has considered and allowed O&M expenses based on historical figures and trends and also linked the same with CPI-X adjustments in its Determination and Decision on the MLR. For instance, the T&D O&M has been enhanced by 1% to the previous trend of 7.7%. Likewise, for power generation, variable O &M was linked with KE's own generation whereas fixed O&M was linked with CPI-X adjustment. This resulted in accumulated total O&M expenditure amounting to Rs. 224 billion [with Compounded Annual Growth Ratio (CAGR) of 8.92%] assumed for working out financial statements for the 7 years control period. However, KE has assumed a total of Rs 258 billion accumulated O&M for the control period, with a higher CAGR of 12.36%. No rational was provided by KE for higher O&M cost assumptions for the purpose of financial projections. Moreover, O&M expense is not a matter contested by KE in its letter to GOP based on which this reconsideration request has been filed. In view of the above, an O&M allowed amount of Rs 224 billion should have been assumed for the purposes of financial projection, which reduces KE's projected loss by a further Rs 34 billion.

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25.4 Power Generation Facility at Bin Qasim Unit 4- Cost Rationalization:

25.4.1 It was also noted that KE has assumed a higher capital cost of US$ 0.98 million per MW for its new plants (Bin Qasim-4) against US$ 0.694 million per MW allowed by the Authority in its Decision on MLR. This capital cost rate was allowed by the Authority based on the cost of recently approved projects of similar technology. Moreover there is no rationale to inflate the cost for this power generation facility when globally the cost of thermal technologies is sharply declining. By including allowed cost of US$ 0.694 million per MW, coupled with the correction of higher depreciation expense projected by KE, reduces the projected loss by a further Rs. 15 billion.

25.5 Provision for doubtful debt - Recovery Loss:

25.5.1 Upon review of recovery loss figure, it has been observed that KE has assumed a total of Rs. 119 billion on account of recovery losses. The recovery ratios incorporated by KE are as follows –

Particulars	2016	2017	2018	2019	2020	2021	2022	2023
KE-RR (%)	88.9	92.2	92.4	92.6	92.8	93.1	93.4	93.8

25.5.2 It was noted that the provided recovery trend (above) has been consolidated for sale to both public and private sectors. However, total sales figures of KE's 28 Integrated Business Centers (IBC) reflect that private sector sales contribute towards 88% of total sales. Such aggregation does not commensurate the actual recovery figures and gives disproportioned weightage to the public sector. For reference, actual recovery ratios for KE's IBCs are categorized as follows –

No of IBC	Categorization	Revenue Contribution	RR
6	Higher Recovery IBCs	39%	98%
8	Good Recovery IBCs	27%	93%
14	IBCs to be improved	34%	76%
28	**Total**	**100%**	

25.5.3 The above table highlights that IBCs reflecting low recovery ratios account for 34% of all revenue sales, which require prime focus for improvement. Whereas, the remaining 66% of sales already represent a high recovery ratio of 93% and above. In view of this, incorporating an overall low recovery ratio for the tariff control period cannot be endorsed by regulator, since the low figure represents a

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relatively smaller share of KE's revenue contribution and it also anticipates the similar trend to continue.

25.5.4 Furthermore, no accounting loss provision is appropriate for tariff considerations against the public-sector sales particularly where there is no rationale to support this assumption.

25.5.5 Therefore, the assumptions relating to recovery ratios should have been based on actual figures and as per actual IBC sales to both the private and public sector. This effectively reduces the incorporated adverse financial impact by Rs. 61 billion when incorporated, as illustrated below –

Particulars	2016	2017	2018	2019	2020	2021	2022	2023
KE-Applied RR (%)	88.90	92.2	92.4	92.6	92.8	93.1	93.4	93.8
KE-RR (%) with a progressive improved ratio	92.0	92.0	93.0	94.0	95.0	97.0	98.0	99.0

25.6 Depreciation charged on Revalued Assets:

25.6.1 It was also noted that the depreciation expense in KE's projections have been incorporated on the basis of assets revalued with higher depreciation costs compared to allowed depreciation on the historical cost of those assets. With rationalizing projected depreciation expense on historical cost basis as per the allowed percentages, reduces the loss further by about Rs. 45 Billion and thus turns KE into a profit-making entity with a profit of Rs. 37 Billion.

25.7 Extent of Short-Term Loans required:

25.7.1 In light of the foregoing, after rectifying and correcting the above assumptions employed by KE in its projections, KE's short term borrowing and loan requirements, which have otherwise been projected as Rs. 421 billion, are also drastically reduced. As a result, with reduction of borrowing costs the KE's projected profit increases by a further Rs. 45 billion.

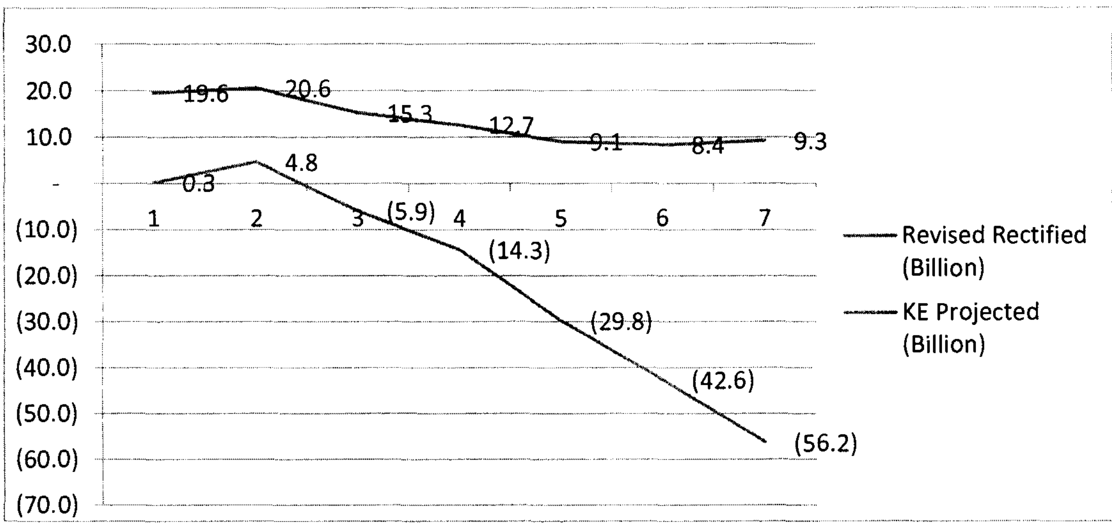
25.8 Spread used for short term loans:

25.8.1 KE has assumed a considerably high spread of 4% above KIBOR for its short-term loans. There is no justification for using such a high spread over KIBOR for an entity with a large asset base like KE and also as per prevailing market liquidity and lending spreads over KIBOR. Accordingly, considering recent market trend with respect to financing cost, a reasonable spread of 2.5% over KIBOR is assumed then KE's profit will further increase by Rs. 12 billion.

25.9 Summarized revised Financial Projections:

25.9.1 In light of the foregoing discussion and after making the necessary corrections in the assumptions used by KE for its financial projections, the overall profitability of KE for the 7 years control is tabulated and charted below:

Particulars	Impact	Cumulative P & L
	Rs. in Billion	Rs. in Billion
Cumulative tariff control Loss projected by KE		(143.7)
Adjusted For:		
Heat Rate and Auxiliary	21.2	(122.5)
T & D Losses	2.3	(120.1)
O & M Expenses	37.2	(83.0)
Bin Qasim 4 Plant -Cost Rationalization	14.8	(68.1)
Provision for Bad Debt- Recovery	60.8	(7.3)
Depreciation Expense	45.1	37.8
Short term borrowing	45.4	83.3
Spread on local Loans	11.8	95.1



25.9.2 Therefore, the Authority considers that it is incorrect to reflect and project that the determined MYT will turn KE into a loss-making entity. Likewise, it is also incorrect to state that the determined MYT will make the KE's operations unviable, un-bankable, and unsustainable and will impair KE's ability to undertake investments. The

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projections with revised assumptions clearly show that KE shall have adequate financial viability and has to ensure security of supply and service benefit to its consumers. Further, it is pertinent to specify that the above discussed assumptions have applied by the Authority while giving due consideration to the consumer interest as well as revenue sufficiency for utility like KE.

25.9.3 With regards to the objections raised by financial institutions such as HBL & UBL etc., it is clear from the above analysis that the concerns shown by these commentators are due to difference in assumptions considered by the Authority vis-à-vis assumptions taken by K-Electric while making future projections. Here it is pertinent to mention that HBL, UBL, PACRA, OPIC and IIRA raised similar concerns during the MLR proceedings, which were discussed and decided upon by the Authority in its MLR decision. Further, no analysis has been submitted to NEPRA by these commentators neither in the MLR nor in the Reconsideration Request to substantiate as to how the current MYT will turn KE in to a loss making entity. Whereas, the aforementioned itemized analysis clearly depicts that assertions of K-Electric becoming un-bankable, unsustainable or unviable are not correct.

26. ***Issue #3 Whether the determined MYT have any significant adverse implications on KE's consumers?***

26.1 The Federal Government did not specifically respond and provided its comments and analysis on this issue also. However, the Federal Government, through letter dated October 26, 2017 and December 04, 2017 has broadly expressed that the Authority should "ensure that the consumer interest in terms of continuous and efficient service delivery is maintained."

26.2 KE's letter dated October 12, 2017, forwarded by the Federal Government as part of the reconsideration request to the Authority, specifies that KE has planned an investment of Rs. 355 billion which includes 900 MW BQPS-III, 1350 MW power generation plant through equity participation in IPPs and 800 MW from external power producers. KE expressed that under the existing MYT, KE will not be able to undertake this investment, which could impact bridging increasing gap for demand and generation, inability to provide new connections, reduction in reliability etc. KE also submitted that the economic and social agenda of GOP could suffer a severe setback with a slow-down of Pakistan's GDP and reduction of employment in Karachi.

26.3 The interveners and commentators have also commented on this issue which are summarized below;

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a. ***Government Organization:***

- The supply of reliable electric power is of utmost importance to Karachi's, Sindh's and Pakistan's development. (***Government of Sindh -Energy Department).***

b. ***Business Chamber:***

- Ensure uninterrupted power supply for all of its Karachi based members ***(Overseas Investors Chamber of Commerce and Industry).***

- If more investment does not come it will increase the gap between demand and supplies, which will leads to load shedding thus will hurt our industries, productivity and exports ***(The Federation of Pakistan Chamber of Commerce).***

c. ***Banks and Financial Institution:***

- KE's inability to invest in infrastructure may have significant implications for the consumer. Therefore a viable tariff model is needed for KE which enables viability of operations and continued investments to best serve the consumers ***(UBL).***

d. ***NGOs & Others:***

- In order to successfully cater to growing demand of power continuous investments across the value chain is required, no major capital can be raised if the new tariff is implemented. KE's inability to invest in the city's power infrastructure would increase load-shed, frequent outages and declining service levels ***(Clean Energy Service and Solution).***

- KE's inability to invest will impact the utility's services levels and such a scenario will clearly be against the interest of the consumers ***(LRBT).***

- A reasonable tariff inclusive of actual recovery losses will safe K-Electric from financial loss and help to invest in infrastructure development thus will ensure continuous supply of electricity to its end consumers ***(Office of the Union Committee & Union Committee Administration).***

- TCF is keen to see KE thrive as a profitable entity, financially and operationally capable of ensuring consistency and improvement in the supply of electricity to the residents of the city ***(The Citizen Foundation).***

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26.4 The issue of consumer interest and public welfare has already been discussed in earlier section of this decision. In light thereof, it also needs to be considered that the investment made by KE under previous MYT regime was predominantly in generation segment and lesser investment was made in transmission and distribution segments. Considering that KE is a vertically integrated utility (VIU), appropriate investment should have been made in each of its Generation, Transmission and Distribution segments in the best interest of consumers.

26.5 The historical analysis also transpires that KE has been unable to significantly reduce the T&D losses and improve the quality of service to consumers. However, it significantly benefited through retention of efficiency gains in generation segment. Thus, profitability of KE resultantly increased during the preceding control period despite the fact that during the same time, quality of service to consumers has not enhanced, recovery ratio deteriorated and T&D losses target were not achieved.

26.6 The current MYT for KE was specifically structured to ensure that investment is made in each segment with the objective of ensuring better service delivery and maximizing consumer service. At the same time, a pre-determined rate of return has been allowed on all the existing and future fixed assets of KE. Through this, KE is thus afforded an incentive to reap the benefits of sales growth and efficiency gains in the transmission and distribution segment. The current MYT is therefore structured to balance the interest of consumers as well as KE and at the same time, is aimed towards consumer welfare and security of supply.

26.7 Moreover, the assertions related to the economic viability and cash flow needs of KE have already been clearly analyzed in earlier section of this decision, which establishes that even with the KE's described challenges, it will have adequate revenue sufficiency under this MYT to ensure its sustainability and viability. The purpose of the assessed regulatory targets itself aims to ensure sustainable and viable operations in the best interest of consumers as well as of utility.

26.8 In view thereof, it stands established that there is no adverse impact to K-Electric and its consumers under this tariff, since the tariff structure encompasses appropriate mechanisms for incentivizing investments in relevant segments of electric power services while ensuring consumer interest with defined regulatory targets.

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Issue # 4: Whether this request of the Government to consider recovery loss of K-Electric, based on recoveries of 87.6% is justified and in the interest of consumer?

KE's Submissions:

26.9 K-Electric in its letter, dated October 12, 2017, based on which Federal Government has submitted reconsideration request of MYT, expressed that NEPRA has allowed bad debt allowance of just 1.69% not recognizing the KE's actual recovery of 87.6% as a performance measure in tariff, which will cause a severe gap in cash flows for KE over the next seven years. KE also expressed that this will impact investments planned and will create liquidity issues and due to which there will be a significant increase in load-shedding across the city. Therefore, KE requested to revise improvement trajectory so that the tariff remain cost reflective and does not lead to insolvency.

26.10 K-Electric in response to the issues framed by the Authority submitted its response vide letter No KE/BPR/NEPRA/2017/216 dated Dec 04, 2017. The key submissions of KE are summarized below –

- KE's service territory is often plagued with areas which are faced with governance issues, land use complexities, weaker rule of law and unchecked violence/crime, China Cutting etc. Therefore, year wise recovery target benchmarks should be allowed. KE in support thereof also provided IBC wise bills recovery data
- KE is 100 year old company document requirement w.r.t write off provisions needs clarity.
- It is not practical for legal forums to cater for such volume of default cases which is approx. 550,000. The recovery obtained may be more than the legal cost incurred.

26.11 The interveners and commentators also commented on this question framed. The comments of the interveners and commentators are summarized below;

Mr. Arif Bilwani (Intervener):

a. The recovery targets and T&D losses allowed to KE are higher and inconsistent with DISCOs. Allowing further write-off of doubtful debts and higher T&D losses will further burden the consumer's tariff.

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Commentators:

b. Comparing KE's recovery loss with other distribution companies that are owned and managed by GOP and get cash support from GOP is not justified. Disallowance of recovery loss results in a tariff which is not cost reflective and creates a cash shortfall for the utility. These targets need to be gradual, and could be linked with investments, parts of which can be used to employ technology based solutions ***(Clean Energy Service and Solution)***

c. Higher than the actual and unachievable recovery rates for tariff purposes create a serious cash shortfall for K-Electric, resultantly it will be extremely difficult to comply with the financial ratios/ covenants. Therefore lenders would have serious concerns for KE's ability to attain significant improvements in recovery rates ***(HBL).***

d. KE should be given the chance to improve its collection targets as mentioned in NPP 2013 and therefore the present collection performance of KE be accepted at 87.6% for the tariff collection purposes ***(Karachi Chamber of Commerce and Industry).***

e. The gap in cash flows as per NEPRA and actual recovery will always be affecting KE's ability to repay existing loans and raised new finance ***(UBL)***.

26.12 It is noted that the arguments being put forth again by KE in support of their claim to increase recovery loss ratio stand thoroughly considered and addressed by the Authority in the Determination (reference para 25.13)and later in the decision on MLR (reference para 20.16 to 20.31). However, in order to advance the ends of justice, KE's point of view is considered a new.

26.13 The Authority in its Tariff Determination and subsequent Decision allowed a Recovery loss of 1.69% while allowing to claim additional write-off on an actual basis after fulfilling the prescribed process. This decision is also in line with international best practices wherein, a reasonable recovery loss (which is generally a small percentage) is included in the projected cash flows.

26.14 Moreover, considering the law and order challenges and ground realities of certain areas of the Karachi, a margin of 5.2% in its T&D has already been allowed by the Authority.

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26.15 KE's recovery ratio has declined from 88.6% to 87.6% during the period from 2009 to 2016. This clearly depicts a below par performance of KE on recovery side. Being mindful of this performance and operational inefficiencies, the Authority in its Determination and MLR decided not to pass through such costs on to the consumer as the same would be unfair and unjust. Further, this is consistent with the treatment meted out to XWDiscos. Moreover, there is no justification for the financial burden of declining recovery ratios to be borne by the Government in the shape of more subsidies, which defies the basic purpose and spirit of privatization K-Electric (then KESC).

26.16 It is also pertinent to highlight that neither the Federal Government nor the commentator (i.e. Government of Sindh) have expressed their views and commitment to address the issue of delayed payment of public sector dues as highlighted by KE in their submissions. Instead of requesting the regulator to pass on the burden of less recovery to the paying consumers, the Federal Government should itself ensure timely payments by all public sector entities/ organization.

26.17 Similarly, it is foremost responsibility for the Provincial Government to provide enabling environment through law enforcement in order to ensure full recovery by KE instead of desiring higher recovery loss to be allowed. It is also to be noted that being cognizant of the law and order situation of the city, the Authority has already allowed a margin of 5.2% in the T&D losses target.

26.18 The KE's submission during the hearing on December 05, 2017, wherein it submitted that the dynamics of Karachi are different from rest of the Discos therefore, its comparison with DISCOs is not justified is also considered. It is to be noted that instead of comparing KE's performance with individual XWDiscos, the Authority evaluated KE's performance with combined performance of all XWDiscos which includes both good and bad territories. It was observed that the wholly owned public sector XW Discos performed better in terms of T&D and sales recovery ratio.

26.19 The views expressed by financial institutions on the issue was also considered and it was noted that no justification and rationale was provided on the basis of which the recovery losses should be relaxed and the impact of non-recovery be passed on to consumers or borne by the Federal Government. Further it is also to be realized that the receivable is not lost in the system unless the same is written off. The Authority in its Determination and MLR Decision was mindful of the fact that delayed and/or non-payment of bills, may lead to cash flow issues for which utility requires a reasonable

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level of working capital. Therefore, while recognizing the need for a working capital, the Authority has already allowed KE to retain the Late Payment Surcharge (LPS) as a cost of working capital (reference para 25.23 of the Determination). The LPS amount allowed to be retained by KE is sufficient to cover not only the recovery loss, but also to cover the utility's other genuine working capital requirement such as advance payment on account of fuel (furnace Oil/RLNG) etc. Therefore, the KE's working capital requirements in view of the historical trend along with existing tariff parameter have been duly considered in this MYT.

26.20 However, during the midterm review, the Authority may review the working capital needs of KE if there are significant changes in working capital needs which cannot be foreseen at this stage but could impair KE's ability as a going concern entity in this MYT's control period. During that review, if there is an increase in working capital requirement due to factors beyond KE's control, the Authority may consider the extent to which working capital requirement needs to be revisited. Likewise, in case if KE's working capital requirements are significantly altered / reduced, the resultant impact may be addressed in the tariff at that stage.

26.21 However as part of reconsideration of the matter, the recovery ratio (RR) for each of KE's 28 IBCs were dissected and analysed. The said IBCs can be categorized into the following 3 groups based on their recovery ratio –

No of IBC	Category	Contribution	RR
6	Higher Recovery IBCs	39%	98%
8	Good Recovery IBCs	27%	93%
14	IBCs to be improved	34%	76%
28	Total	100%	

26.22 It is clear from the analysis that the 66% of sales recoveries are already well over 93%. KE needs to make improvements with particular focus in those IBC's, representing 34%, where recovery ratios are relatively low. In view of above, it is evident that KE's recovery target given in the current MYT is realistic and achievable and hence do not merit revision.

26.23 Moreover, any relaxation on the recovery loss targets will eventually result either in penalizing the already paying consumer or burdening national exchequer thus defying the basic purpose of privatization of KE (then KESC).

26.24 It is also important to consider that as on June 2016, KE's running defaulters and permanently disconnected defaulters' amount to Rs 20.31 billion & 71.72 billion

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respectively as per the data provided by KE. Without disconnection of running defaulters, a request to allow annual recovery gaps would be an unfair. If the said recovery gap is allowed to KE, it would have a double impact, first in the shape of receivables appearing in KE's books and secondly KE recovering it as loss through tariff.

26.25 It is abundantly clear from the above that to alter or modify the allowed recovery losses, is neither in the consumer's interest nor will it impact the sustainability of supply of electricity or the sustainability of KE as an entity. Rather inability to meet regulatory benchmarks for recovery will cause more damage to the consumer's interest and KE as an entity. Besides it also burden the paying consumers and the national exchequer. There are no substantiated and justified grounds for reconsidering and enhancing the allowed recovery losses for K-Electric. The decision in this regard is thus rational in incentivizing a privatized entity to increase its recovery efficiencies and also in the best interest of the paying consumers besides it will not burden the national exchequer due to KE's inadequacy in recovering the billed amount.

26.26 The Authority has however reconsidered the write off criteria prescribed in the Decision and hence the following criteria with respect to write offs is to be observed:

1) The defaulter connection to be written off shall be disconnected.
2) The amount of write off shall be approved by the KE BoD which shall certify that KE has made all best possible efforts to recover the amount being written off.
3) KE Auditors shall verify that the amount is non-recoverable notwithstanding the efforts of the company.
4) The terms of write off shall also be given in detail.
5) In case any amount written off is subsequently recovered from the customer, the recovered amount shall be adjusted in next year's tariff.

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27. ***Issue # 5 : Considering spirit of privatization of K-Electric (KESC) and earlier correspondence dated 26th Jan'17 from Secretary MoWP, whether this reconsideration request for a performance based tariff structure similar to initial Multi-Year-Tariff (2002) is justified wherein efficiency gains in power generation as well as in Transmission and Distribution are to be retained by K-Electric?***

KE's Submission:

27.1 K-Electric in its letter dated October 12, 2017 forwarded by Federal Government for reconsideration of MYT by the Authority, submitted that a performance based tariff structure as done in the previous MYT may be allowed to KE where the onus to invest and make return would be on KE. KE further stated that NEPRA should set minimum investment requirements and ensure that KE adheres to these targets. KE also submitted that NEPRA should also provide a transparent mechanism for the claw-back to ensure that excess profits are not made and benefits arising are shared with consumers.

27.2 Later, K-Electric in response to the issues framed submitted its response vide letter No KE/BPR/NEPRA/2017/216 dated Dec 04, 2017, wherein it submitted as follows –

- A fixed-rate structure with a locked investment plan provides no incentive to improve generation efficiency through induction of new plants. It significantly curtails KE's ability to modify its investment plans with changes in operating dynamics of the city, adaptation of new technologies and external factors beyond control of KE. Investment plan needs to be dynamic.
- The performance-based mechanism allowed to KE in the past has proven to be successful. More than 130 billion was invested, fleet efficiency improved from 30% to 37.4%, T&D losses improved from 36% to 22.2%.
- Consider the higher risk profile of KE in allowing return on equity
- KE submitted that either performance based structure be allowed which –

  i. recognizes actual recovery loss in tariff linked with an improvement trajectory

  ii. provides market based USD returns on actual invested due to tariff/efficiency rebasing and

  iii. allows retention of efficiency gains, similar to the previous MYT with claw back mechanism.

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Or

i. recognize actual recovery loss in tariff linked with an improvement trajectory

ii. allow return on actual equity invested into the business and actual gearing ratio instead of penalizing KE for the past investment decisions taken on the basis of the previous MYT

iii. allow flexibility to KE to modify its investment plans with the change in operating dynamics of the city, adaptation of new technologies and external factors beyond control of KE:

27.3 The interveners and commentators comments on this issue are summarized as under:

a. ***Government Organization:***

- A performance based tariff structure is critical for an integrated utility like KE, where instead of allowing investments in advance through tariff, the company should be incentivized to fund its investment through retention of efficiency improvements. Further, the performance based tariff also provides the necessary flexibility to make additional investments, which is critical to meet the power need of Karachi ***(Government of Sindh (Energy Department).***

b. ***Business Chamber:***

- KE should be allowed the continuation of the previous performance based tariff regime and be subjected to the fixed asset base in the next tariff period ***(Karachi Chamber of Commerce and Industry).***

- Instead of continuing towards a performance based structure, NEPRA has imposed a cost plus tariff regime which is not the preferred choice of regulators worldwide. The recent progress was possible due to the performance based tariff regime which incentivized investment and improvements in efficiency. Therefore continuity and clarity in policies is maintained to allow the KE management to set realistic target and continue developing investment plans that can build upon existing ones ***(Overseas Investors Chamber of Commerce and Industry).***

- A fixed rate based tariff structure assumes fixed investment plan, which is not viable for vertically integrated utility where additional investments are required ***(The Pakistan Business Council).***

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c. ***Banks and Financial Institution:***

- Due to current fixed rate tariff structure, KE's margins are likely to reduce which will impact the borrowing for new investment. Therefore the tariff structure may be revised to performance based tariff structure. Further, NEPRA should also clarify any potential tariff adjustment at the end of control period such as setting of based tariff including level of return and tariff structure **(UBL)**.

d. ***NGOs & Others:***

- Switch to a fixed-rate based structure with a fixed investment plan is not understandable. Further, due to the following fundamental differences in tariff structure, returns and cash-flow allowed, KE will be well below those allowed to other power sector entities:

  - O&M for IPPs is indexed using CPI only, however for KE NEPRA has applied CPI — X.
  - Debt is allowed as a pass through in IPPs' tariff whereas KE is given a depreciation component in its tariff spread over the life of asset (25 to 30 years) resulting in a major cashflow mismatch.
  - Working capital allowance is not comparable
  - Claw back concept is applicable only for KE ***(Clean Energy Service and Solution).***

- It is essential that KE is provided with a tariff structure that is set considering the operational environment and ground realities and allows recovery of all prudent costs, offer returns comparable to the risk profile of KE and ensure execution of investment plan of KE which is critical for the reliable and affordable electricity supply to the people of Karachi. Further, all key lenders have raised serious concerns on KE's ability to survive under the MYT determined by the Authority and to raise any financing for its new investments. ***(LRBT).***

27.4 The arguments submitted by KE in support of its claim regarding performance based tariff structure stands duly considered in the Tariff Determination (reference para 21.16 to 21.25 of tariff determination) and also in the Decision on review motion (reference para 9.15 to 9.22 of the review motion decision). However, since the Authority is reconsidering its earlier decision, therefore, KE's point of view on the

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issues have been re-heard and closely analysed. A summary below highlights the jist of Authority's earlier views in this regard;

a. Previous MYT was structured in a way to incentivize a loss-making Utility to bring efficiency in its operations by making investments. Therefore, efficiencies in the form of improved generation efficiency, reduced T&D losses, increase in consumer base etc. were allowed to be retained by K-Electric in the control period. Due to this arrangement, no pre-determined return component existed in the previous MYT.

b. As now KE tariff has been rebased whereby efficiencies achieved during the previous MYT have been shared with the consumers, hence in lieu thereof, a pre-determined return component on existing as well as future investment has been added in KE's MYT tariff which ensures sustainable supply of power to the consumers as well as bankability and viability of KE.

c. The current MYT has been developed to ensure that K-Electric will optimize returns through increase in sales, improvement in T&D losses, reduction in its O&M cost etc. Under previous MYT, K-Electric reaped profits through generation efficiencies and did not adequately invest in transmission and distribution business despite being a vertically integrated utility, requiring across the board investments in its supply chain.

d. The allowed adjustment mechanism in the current MYT would penalize K-Electric if it deviates from its own submitted investment plan or fails to achieve the performance targeted with the investments being allowed with adequate returns.

27.5 The GOP representative fully supported the stance of KE for performance based tariff in its reconsideration request, in contrast to Ministry's earlier letter dated Jan 26, 2017 on the issue of performance based tariff to KE and efficiency gains retention by KE.

27.6 The previous approach adopted by KE under the previous MYT for investing primarily in generation business and reaping large efficiency gains is also to be considered since it did not serve the best interest of the consumers. Undertaking investment predominantly in generation and making profits was an easier approach whereas transmission and distribution segments also required a continuous improvement to achieve the regulatory targets and to improve the quality of supply to consumers. In this backdrop, the Authority, in the current MYT, decided to revise the tariff structure

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in the interest of the consumers while also incentivizing KE to improve the T&D segment. This MYT is thus structured to balance the interest of both KE and the consumers. Previous performance based regime was allowed at that time considering that KE was a loss making entity which required strong incentive to turn around the Company. Accordingly, no separate return component was allowed. Now when KE is a profit making entity and a component of return has been allowed, extension of such incentive mechanism cannot be justified.

27.7 The breakup of the investment allowed in MYT to KE is as under –

Particular	Rs. in M	%age
Generation	97,305	33%
Transmission	127,942	43%
Distribution	73,668	25%
Total	298,915	

27.8 Based on the above allowed investment plan in the current MYT, it has been ensured that adequate investment is directed towards an asset base that is responsive to the needs of a VIU and its consumers. Moreover, the review of international best practices also validates the Authority's decision in this regard, as the previous MYT was an incentive based mechanism inclined towards generation efficiency. The current MYT is a shift to a more global Performance Based Regime as KE can now achieve and retain gains during the tariff control period if it improves beyond the targeted benchmarks for each of the segment.

27.9 Through this the Authority has thus ensured in the best interest of consumer that future investments are directed towards each segments of VIU i.e. Generation, Transmission and Distribution. Therefore, after reconsidering the matter, there appears to be no cause to change the already approved mechanism in MYT. Since it is neither in the interest of the consumers and nor will adversely affect the sustainability of supply of electricity. The return allowed in the MYT ensures the sustainability of KE as an entity.

27.10 It has also been considered that KE has expressed that this approved MYT has not allowed flexibility in terms of *"KE's ability to modify its investment plans with the change in operating dynamics of the city, adaptation of new technologies and external factors beyond control of KE"*.

27.11 The Authority albeit has addressed this issue in its Decision taken earlier on the review motion , as reproduced hereunder;

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XXIV. A midterm review to the extent of allowed Investments only shall be carried out, after completion of three years of the tariff control period, and in case of under investment /performance by K-Electric, the base rate adjustment component may be adjusted, <u>keeping in view the amount of Investment allowed vis a vis actual investment made by K-Electric during the period, after thorough analysis and review by the Authority</u>. Similarly, for the last four years of the tariff control period, adjustment of base rate adjustment component, may be made in the next tariff determination, keeping in view the amount of Investment allowed vis a vis actual investment made by K-Electric during the period, after thorough analysis and review by the Authority. For clarity purpose, a self-explanatory adjustment mechanism has been attached as Exhibit-I. [Emphasis added]

27.12 The Regulator has to encourage efficiencies and quality of supply through a conducive investment environment. KE has been allowed a total Capex of Rs. 299 billion covering all three segments of its value chain linked to its performance benchmarks such as reduction in transmission and distribution losses and improvement in generation efficiencies. Considering KE's submission that investment plan approved is rigid and do not provide flexibility, it was noted that with regards the planned vs. actual Capex different scenarios could emerge on the investment. Accordingly all these scenarios are elaborated below :

27.13 **Additional Investments**

27.13.1 In case KE wants to bring more investment to outperform the regulatory targets in Transmission & Distribution (T&D) segments then KE shall be allowed to retain the gains over and above the approved T&D loss target. Hence there shall be no revision in the T&D losses benchmarks and base rate adjustment component, implying that no cost of funds/WACC shall be allowed for that additional investment. Accordingly it would be KE's own commercial decision for these additional investments.

27.13.2 In case, KE achieves Authority's given T&D segments targets with additional investment then that additional investment wouldn't be allowed cost of funds/WACC. Meaning thereby no revision shall be made in the base rate adjustment component.

27.13.3 In case, KE does not meet the T&D segments targets and still end up making additional investment then such additional investment would be construed as inefficient for which again no adjustment shall be made in the base rate adjustment

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component. Thus consumers would be protected from any such decisions with non-attainment of required targets.

27.13.4 Any additional investment in the generation sector would be allowed, keeping in view the prudent cost, changing technology and regional and international comparable benchmarks. Therefore, prior approval of new investment in generation segment other than the allowed 450 X 2 MW RLNG plant (BQPS-III) shall have to be obtained from the Authority. The Authority would accordingly decide on the issue and if allowed, would adjust the base rate adjustment component to the extent of that additional investment. Pertinent to mention that unlike past, KE shall not be allowed to retain the generation efficiency gains in this regard.

27.14 **Under and/or efficient Investment**

27.14.1 To the contrary, if the regulatory targets in T & D segment are met with by employing resources efficiently and diligently and hence meeting the regulatory targets at a cost less than the allowed limit, then no revision shall be done in the base rate adjustment component. Thus KE shall be allowed to keep the savings.

27.14.2 In case KE does not carry out committed investment (as mentioned in para 28.30.19 of the Determination) and does not meet the regulatory benchmarks set in transmission and distribution segment then the base rate adjustment component would be revised accordingly to reflect the under investment made by KE.

27.14.3 In case, KE manages to build the BQPS-III power plant at a cost less than the cost allowed by the Authority then KE shall be allowed to retain the savings by not adjusting the base rate component.

27.14.4 In case KE abandon its plan to setup BQPS-III, then base rate adjustment component will be adjusted downward accordingly.

27.15 In view of the foregoing, it is clear that there is no bar on KE to make investment beyond the allowed Capex as it has the flexibility to invest as much amount as KE deems appropriate.

27.16 The midterm review will be an appropriate time to evaluate on the effective realization of the investment plan. However, at the same time, to protect the consumer's interest, KE shall be required to submit annual investment progress reports. The purpose is to oversee the physical aspect of the investment plan and its correlation with the allowed regulatory targets.

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Issue # 6 In the matter of all XWDISCOs, WAPDA Hydel and NTDCL, the Authority has allowed RAB based on the written down value of fixed assets. Whether this request of the Government to work out the RAB of K-Electric based on capital employed (sum of Equity + Debt) is justified?

KE's Submission:

27.17 K-Electric, in its referred letter of October 12, 2017, forwarded by GOP for reconsideration of MYT submitted that the assumption of RAB on written down value/cost basis, instead of capital employed (debt + equity), has resulted in a significantly reduced RAB for KE, thus resulting in lower returns for the company and an inadequate tariff level. It is important to note that all investment and financing decisions made by KE in this control period were on the basis of this definition of RAB.

27.18 KE further argued that if at the time of Previous MYT in 2009, NEPRA had given guidance that such departure at the end of the control period was a possibility, then investors (both equity and debt) would have planned and taken different investment decisions. At this stage, it is not practical to withdraw the invested equity and it would lead to significant cash shortfall, which will be against the interest of consumers.

27.19 KE submitted that as a result, equity invested in the business is not reflected as an investment in KE's fixed assets to the extent that it relates to funding of losses. KE further expressed that financial institutions will not finance future projects, which would create massive capacity gap and would result in load shedding.

27.20 In response to the issues framed by the Authority, KE gave the following rationale for revising the RAB calculation;

- NEPRA has revised the definition of RAB and based it on the written down value of fixed assets as against the previous RAB definition [sum of share capital + reserves + debt -cash and securities]. The latter should be used to assess RAB
- This change in definition has reduced KE's RAB significantly, resulting in lower returns for the company and an inadequate tariff level, causing unavailability of funds to the required Capex requirement thus severely damaging service for consumers.

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- Allowing return on invested equity [Rs.179 billion] will only result in ensuring return on the equity injected by KE and profits reinvested in the company which will be consistent to the Authority's approach followed for GENCOs.

- The total investment by the investor is based on the net present value of future cash flows of the business rather than its book value. If the investor is required to fund the equity shortfall in the target company, then the bid price will be adjusted by the amount of required investment. However, if there is no such shortfall, then the unadjusted bid price will be paid by the investor. In either scenario, the total investment to be made by the investor will be the same.

27.21 The interveners and commentators also commented on this issue, which are summarized as under;

a. ***Mr. Arif Bilwani (Intervener)***

RAB definition and debt equity ratio as allowed shouldn't be changed.

b. *Government of Sindh (Energy Department)*

Other issues including recovery loss and regulatory asset base are also required to be carefully examined.

c. *Others (Clean Energy Service and Solution):*

Change in the definition of RAB to written down value of fixed assets results is a double hit; on the one hand the debt and depreciation terms have a negative arbitrage, and on the other hand, the lower RAB is used to calculate the return on equity. Uncertainty is the enemy of investment. Unilaterally changing something so fundamental after an investor has made its investment bode well for a regulatory environment that protects investment. Based on regulatory precedents where NEPRA allows returns on the basis of invested equity to GENCOs, KE had requested NEPRA to adopt the same approach when calculating KE's RAB. However, NEPRA denied KE's request on grounds that allowing KE returns on invested equity would tantamount to allowing returns on past losses which is simply incorrect despite being discriminatory.

27.22 During the hearing, GoP representative fully owned and endorsed the viewpoint of KE on all issues presented in the reconsideration request.

27.23 The KE's reasoning put forward by GoP in support of its claim regarding calculation of RAB from equity side stands duly deliberated and considered by the Authority in

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the Determination (reference para25.16) and later in the review motion Decision (reference para14.96). However, the Authority has reconsidered this aspect, in light of the KE's submissions on the issue.

27.24 The summary of the Authority's views on this issue in the MYT Determination and Decision on Review motion is as under–

- Under this new MYT, a return component has been added for the existing as well as future Investments, therefore, asset side RAB approach has to be adopted to encourage more investments for asset creation towards the system expansion and rehabilitation, to ensure safe and reliable supply of electricity to the consumers.
- Assuming RAB from equity side at this stage, would mean allowing return on past accumulated losses; for which any risks of such gain or loss were to be borne by K-Electric.
- At the time of purchase, the investor had already discounted the bid price in view of the existing and the prospective future losses at the time of privatization of KE.

27.25 The Authority had also considered the following aspects while considering the RAB;

i. Ensured clarity pertaining to the application of profit claw back mechanism.

ii. Excluded the impact of Deferred Tax Assets from the equity, which does not reflect actual equity employed by the company.

iii. To ensure e *"use and usefulness"* of asset rather than sources of funds

27.26 Further the existing tariff model is progressive as it allows return on future fixed assets to be created. If RAB is taken from equity side then the rational for allowing return on future fixed assets gets misplaced. Further KE in its investment plan has disclosed its intention of investing in IPPs. With previous RAB definition KE will be getting a return on the same investment not only through its MYT but also via IPPs mode. Thus consumer would thus be double burdened

27.27 While reassessing this aspect, the International jurisdictions and global best practices. Energy Regulators Regional Association (ERRA) that comprises of 37 independent global energy regulatory bodies, primarily from Europe, Asia, Africa, Middle East and the United States of America including NEPRA was considered. The ERRA on this issue of determination of regulatory asset base (RAB) concludes that though there is no defined methodology for determining RAB, however some common aspects have been identified which include that the assets included in the

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RAB should be those used solely for the provision of the regulated services. The asset valuation methodology used by most regulators are also on the basis of historic cost.

27.28 A 2017 report of the Council of European Energy Regulators (CEER) states that the RAB should be formed by the assets necessary for the provision of the regulated service in their residual (depreciated) value. The regulatory theory and the practice views the determination of the revenue requirements of a regulated utility from an operational perspective, with calculations based on the operational costs requirements and on the capital costs (assets) requirements. A survey data submitted by 22 European Member States in the same CEE report was also analysed, wherein, all the regulators count the fixed assets into the RAB of electricity transmission and distribution operators. The regulators usually also consider other criteria of assets inclusion such as prudence and the fact that the assets are used and useful to the regulatory consumer services.

27.29 Although some regulators revalue the asset in order to reflect the market price of that asset. However, in such cases return allowed are always real (inflation adjusted) unlike in the approved MYT wherein, the RAB is worked out on historic basis with returns allowed on nominal basis. Hence the Authority has already allowed a return to KE on nominal basis on the historical cost written down value of assets. The Authority has also considered that the historical cost methodology is preferred since revaluation of surplus of asset burdens the consumers for the cost which the utility has actually not incurred and may not reflect efficient costs besides revaluation involves a great degree of subjectivity.

27.30 With regards to inclusion of equity to cover loss, it is once again reiterated that if the same is allowed it would tantamount to allowing return on past accumulated losses for which any risk of such gain or loss had to be borne by KE instead of burdening the consumer. Further, at the time of purchase, the investor had already discounted the bid price in view of the existing and prospective losses at the time of privatization.

27.31 The arguments submitted by KE for an equity based return allowed to GENCOs was also considered. The Federal Government has not rendered any comments or factual analysis of the return allowed to GENCO's old units in contrast to the KE's demand since GENCO's tariff was based on the equity side, so as to induce GENCOs to inject equity covering up accumulated losses and to enhance investment towards plant efficiency. This approach was allowed to KE considering its financial standing at that time. However, such circumstances now do not exist anymore. It is also important to

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note that under that arrangement, the ROE allowed to GENCOs are in the range of 11.2% to 13.92% which are far less than the overall RoE of 16.90% allowed to KE for its entire value chain. By adopting the GENCOs mode, the resultant reduction of return may make KE financial unviable which is neither desired for KE nor its consumers.

27.32 Pertinent to mention that the difference between taking RAB from Equity side and from Fixed Asset is essentially the working capital i.e. as per the past working of RAB (i.e. capital + reserves + debt – cash) and current working (i.e. fixed assets) approaches to the definition of the RAB, both approaches are in fact equivalent if the working capital is included in the asset base, and if financial participations and intangible assets are not considered.

27.33 The Authority therefore has recognized the need for a working capital requirement and accordingly had allowed KE to retain Late Payment Surcharge in lieu of cost of working capital in addition to write off as discussed in detail above. This will cater for the concerns of banks and other commentators regarding viability of KE. The relevant portion of the Authority's determination dated March 20, 2017 is reproduced hereunder;

"25.23.3. In the matter of XWDISCOs, NTDCL and CPPA-G, other income is adjusted from the allowed revenue requirement while considering it an additional income over and above its revenue requirement. However, any late payment charges recovered from the consumers are allowed to be retained by the concerned XWDISCOs, to the extent of mark-up on delayed payments to IPPs, which is levied on the XWDISCOs by CPPA-G. The Authority allows XWDISCOs to retain the same to the extent of delayed payments by the consumers, because the utilities have to bear additional financing cost in order to bridge their liquidity gap. Accordingly, to be consistent with the decision in the case of XWDISCOs, the Authority has decided to deduct / adjust the other income of the Petitioner, except for the late payment charges and Return on bank deposits for the purpose of base case assessment as discussed hereunder.

25.23.4.The amount of Rs.2,159 million pertaining to the FY 2015-16 (to the extent of private consumers only), on account of LPS, is not being adjusted/ deducted owing to the fact that no working capital allowance is being allowed to the Petitioner, thus, compensating it for any additional cost to be incurred due to delayed payments by the consumers.'

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27.34 In view of above it is thus evident that if as per the request of KE, the RAB is taken from the equity side, then LPS which presently has been allowed to be retained with KE shall be required to be deducted from KE's revenue requirement (tariff) as both LPS and cost of working capital cannot be allowed simultaneously. Moreover, if RAB is worked out from the equity side of balance sheet with LPS is adjusted/deducted from KE's revenue requirement, this will result in a very negligible increase in the overall tariff while it will compromise the best regulatory approach adopted for asset creation for regulatory services and attainment of regulatory targets.

27.35 In view of the foregoing discussion, there is no prudent and justified reason to change the Authority's earlier decision with respect to working out RAB from assets side.

28. ***Issue# 7 The tariff of IPPs, GENCOs, XWDISCOs, NTDCL are all based on debt: equity ratio wherein any equity over 30% is considered as debt. Whether this request of Government to calculate K-Electric's tariff based on actual debt: equity ratio with equity considered over the allowed threshold is justified?***

KE's Submission:

28.1 During the hearing GoP representative fully owned and endorsed the viewpoint of KE on the issue presented in the reconsideration request.

28.2 K-Electric, in its letter dated Oct 12, 2017, submitted that the Authority has determined debt-equity ratio of 70:30 on notional basis rather on actual basis. It again apprised that KE, being a 100-year-old company, cannot maintain this ratio. It was further stated that KE became profitable first time in 17 years in 2012, prior to which it relied on equity finance, since raising debt had proved difficult. Therefore, the debt-equity ratio may be determined on actual basis.

28.3 K-Electric later in response to the issues framed by the Authority submitted the following, vide letter No KE/BPR/NEPRA/2017/216 dated Dec 04, 2017 –

- In previous MYT no condition/limitation was imposed on the company's capital structure as the investment plan was primarily financed by injection of equity by sponsors and reinvestment of profits.
- The Authority in the current MYT has applied a notional gearing of 70:30 Debt to Equity to calculate KE's cost of capital thereby penalizing KE for funding of past losses through equity. Resultantly, KE will be forced to take out equity in the form of dividend

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which will not be possible without impacting KE's ability to execute its investment plan which would hamper the progress of the utility and declining service levels.

- The distribution assets do not qualify as collaterals to secure financing, which makes it impractical to achieve the notional gearing level for Distribution segment.
- It is inappropriate to benchmark KE's capital structure with IPPs, other green field projects, XWDISCOs, GENCOs and NTDCL
- KE's cost of capital should be assessed on its actual debt to equity ratio for the purpose of calculating returns allowed for investments made up to June 30, 2016. A notional gearing assumption of 70:30 can be adopted for calculation of return on future investments.

28.4 The comments of the interveners and commentators on this aspect, are summarized below;

a. Business Chambers:

The approach of the NEPRA with regard to the same set of rules for debt equity ratio is correct ***(Karachi Chamber of Commerce and Industry).***

b. Other

IPPs and Greenfield projects have a 70:30 debt to equity ratio at the time of financial close only, and government owned entities have government support, thus cannot be compared to KE. If a tariff that can support new debt is allowed, then it is reasonable for NEPRA to lay down a target debt: equity ratio be achieved in a matter of a few years. In short, by treating part of its equity capital as debt today, is denying reality, and applying a retroactive penalty without giving the conditions at the time of tariff ***(Clean Energy Service and Solution)***.

28.5 The argument put forward by KE in support of its claim regarding capital structure has already been considered by the Authority in the Determination (reference para 25.21) and later in the review motion Decision (reference para 14.11). However, KE's point of view on the issues has been reconsidered. During the hearing GoP representative fully owned and endorsed the viewpoint of KE.

28.6 The Authority, while deciding the review motion, had clearly stated that the actual debt-equity ratio of entities keep on changing with the payment of debts and changing gearing profiles, hence, those entities may or may not necessarily have an

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optimal capital mix at any specific point in time. The regulators allow a mix of capital structure that is optimum and also in the interest of consumer.

28.7 The Authority again considered that IPPs, DISCOs, transmission companies have all been allowed capital structures in the range of 70:30 to 80:20. Thus there is a defined limit since cost of equity is significantly more than the cost of debt. Increased portion of equity in comparison to debt burdens the overall WACC. In the instant case, debt equity structure of 70:30 was allowed for the purpose of calculating WACC, which is the maximum that has been allowed and also in line with the WACC allowed to other perpetual entities like DISCOs, WAPDA Hydro, NTDC except for Gencos which have been allowed lower returns as compared to KE owing to different capital structure/financial position. KE should not have anticipated a preferential treatment since an optimized ratio of debt: equity is allowed and the entities have to manage their source of financing and debt accordingly to have a reasonable overall WACC.

28.8 While reconsidering the matter, Authority also reviewed capital structure allowed in other international regulatory jurisdiction wherein notional approach is widely used. It is important to also express that where some flexibility is allowed in the Debt: Equity ratio, the return on equity is reduced to neutralize any impact on the WACC allowed. Accordingly, there is no rationale to change the already allowed maximum limit of Debt: Equity ratio.

28.9 The Authority considered that comparison and reference to previous MYT is not justified as no limit was defined for debt-equity ratio, and KE was allowed to invest regardless of the formation of capital structure. Since now, a separate return component along with cost of debt has been allowed to KE, therefore, there is no reason or valid justification to change the already allowed capital structure in the MYT.

29. ***Issue # 8 The Authority has already allowed K-Electric a comparable return for its Generation, Transmission and Distribution Businesses. Whether this request of the Government to consider higher return to K-Electric with US$ indexation also allowed on transmission and distribution business is justified?***

KE's Submission:

29.1 During hearing, the GoP representative fully owned and endorsed the viewpoint of KE on the issue presented in the reconsideration request. Summary of KE's submission on the matter is hereunder:

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- KE's risk is higher than the risk of "stand-alone" generation, transmission and distribution businesses, since it is the only privately owned vertically integrated power utility which is responsible for end-to-end operation of the energy system in Karachi. The reason being –

- IPPs are insulated from risks inherent in the entire value chain whereas KE's generation revenue is exposed to operational risks of Transmission and Distribution businesses, including T&D loss, recovery loss, transmission trips etc. Further, IPPs also benefit from a sovereign guarantee in respect of payments from the power purchaser. The tariff structure for IPPs allows for debt principal payments to pass through whereas depreciation component is allowed in the tariff determined for KE. IPPs tariff are dollar indexed on actual basis whereas KE's tariff is indexed notional @ fixed 2.56%.

- Transmission return should be higher than Government owned entities (STDCL and NTDCL). Private-sector transmission line project [Lahore-Matiari] has also been allowed a RoE of 17% with US$ indexation, and KE may at least be allowed the same.

- A higher RoE should be allowed to KE compared to XWDISCOs as the risk of KE's distribution business is higher given that XWDISCOs purchase power from a centralized pool and, unlike KE, are largely insulated from risks associated with generation and transmission businesses. In addition, XWDISCOs are government-owned utilities and benefit from government support.

- Considering KE's uniqueness as the only privately owned vertically integrated power utility in the Country, the following returns should be allowed:

	Generation	Transmission	Distribution
RoE based on RFO & gas IPPs / STDC / XWDISCOS	15.00%	15.00%	16.67%
Risk Premium (Capacity, Sovereign guarantee & RoW)	2.00%	2.00%	2.00%
RoE adjusted for risk premium– USD based	**17.00%**	**17.00%**	**18.67%**

- In addition, USD indexation at par with other private sector entities be allowed as follows –
    - USD indexation from the base year of its investment for indexation of RoE for the calculation of base tariff; and
    - Moving forward for the control period, actual USD indexation at the end of each quarter.
    - In addition, clarity should be provided by NEPRA on potential tariff adjustments, if any, at the end of the control period (June 2023), vis-à-vis,

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and level of returns for assets already invested and continuation of USD indexation of return of equity from the time of investment.

29.2 The interveners and commentators have also commented on this issue. The comments of the interveners and commentators are summarized below;

a. ***Chamber:***

- The request of KE to be treated at par with IPPs in terms of returns is far fetched. KE and IPPs operate in different regimes which can't be compared unless KE is an IPP at the time of the making of the request. Therefore, the claim of KE regarding higher return with US$ indexation for transmission and distribution is invalid for the present setup of KE ***(Karachi Chamber of Commerce and Industry)***

b. ***Others:***

- KE carries higher risk profile due to absence of sovereign guarantee, no right of way support and shorter tariff tenure. Further comparison of KE's Transmission business with Sindh Transmission and Dispatch Company STDC), which is a government owned project, instead of a private transmission company (Lahore Matiari HVDC), is either a manifest error or an obvious case of discrimination. KE is effectively being penalized for being privately owned. Moreover, in determining the tariff for other private projects, NEPRA allows equity indexation from the year of investment, however in case of KE it has been incorrectly assumed that all investments were made in 2016, which is unfair and discriminatory. Therefore, NEPRA should apply the same USD indexation basis for KE's past and future investments as done for other private projects ***(Clean Energy Service and Solution).***
- The recent tariff determination reduces KE's return on its investments and hence places at risk the organization's ability to support its far reaching social investment program ***(Sindh Institute of Urology and Transplantation).***

29.3 Albeit the Authority has discussed the issue of returns in detail in the Determination (reference para 25.17 to 25.19) and later in the review motion Decision (reference para 14.12 to 14.16). However, considering the instant reconsideration request of GoP, the Authority in order to advance the ends of justice has decided to reconsider the KE's point of view in the matter.

29.4 Following is the Authority's earlier views on the matter as indicated in the Determination as well as in the review Decision:

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- K-Electric was allowed a total RoE of 17.56% for generation segment, comprising of 15% RoE and 2.56% on account of exchange rate variation. These returns were consistent to the IPPs considering the fact KE's power plants are all thermal comprising of gas and F.O and the IRR allowed by the Authority in the matter of RFO/Gas based IPPs is 15% which translate into an RoE of 17%. Since, the impact of CWIP is included, while calculating the Regulatory Asset Base (RAB) for the purpose of return, meaning thereby that return is being allowed for the construction period as well, therefore, the KE has been allowed RoE of 15%. The return allowed to Gas / RFO based IPPs is subject to adjustment on account of exchange rate variations, therefore, KE has also been allowed an additional 2.56% for exchange rate fluctuations.

- KE was allowed an overall ROE of 16.67% for its distribution segment in line with the RoE allowed to XWDISCOS.

- Regarding Sovereign Guarantee, it may be noted that IPP are provided these Guarantee because it eventually depend on its payment from CPPA which further depends on the recovery performance of DISCOs. In contrast, KE being a vertically integrated utility has a direct control over its power supply chain as well as the customer base.

- Regarding RoE on transmission assets, K-Electric has been allowed a RoE of 15% in line with the RoE allowed to STDCL. whereas an IRR of 17% was allowed to Matiari to Lahore HVDC Transmission line project, considering it is first High Voltage DC transmission line venture in Pakistan.

29.5 In view of above, the generation business of KE has already been given a comparable return of 17.56%, which includes 2.56% to cover the exchange rate risk, thus needs no further revision.

- For transmission segment, it is observed that KE's comparison with Matiari-Lahore HVDC transmission line in terms of return allowed is untenable, considering it is first High Voltage DC transmission line venture in Pakistan.

29.6 However, considering the exchange rate risk and in order to assess KE's request to allow US$ indexation on the T & D segments; the prevailing macroeconomic indicators particularly weakening of PKR against US$ have been evaluated. Moreover, it has also been considered that significant investment allowed to KE during this tariff control period is for the transmission & distribution segments, which

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA AUTHORITY carries a higher forex risk for KE. In view of the above discussion and considering that the Federal Government through this reconsideration request has requested NEPRA to review the return allowed to KE, the Authority considers that the request of KE regarding for exchange rate indexation on RoE component carries weight and accordingly has decided to allow currency indexation on the transmission & distribution segment similar to forex risk coverage allowed to KE on its generation segment. The Authority further considers that at the time of midterm review, if the actual PKR to US$ exchange rate variation turns out to be more or less than 5% of projected exchange rate accounted for in the current MYT, the Authority may review its accumulated impact on the allowed RoE component of KE. For the purpose of calculating aforementioned exchange rate variation, the Authority shall take simple average of actual exchange rates as on the last day of each quarter from July 2016 to December 2019, (midterm review) vis a vis simple average of the exchange rates projected by the Authority in its assessment for the same period. If the variation works out to be more or less than 5%, the Authority may review its accumulated impact on the allowed RoE component of KE.

30. **Additional Issue – Exclusion of X factor from Generation O&M**

30.1 Under the previous MYT, K-Electric's O&M component was allowed indexation, with adjustment of X factor. The X Factor was allowed at 2% for Generation & Transmission and 3% for the Distribution segments.

30.2 K-Electric in its I-MYT dated March 31, 2016, interalia, requested for modification of the adjustment mechanism of the O&M cost. In its request KE stated that X-Factor in any year of the control period should be the lower of its existing value (2% for Generation & Transmission functions and 3% for Distribution function) or 30% of the change in the Consumer Price Index (CPI) for the relevant control year, as this will help protect the business in periods of low inflation.

30.3 The Authority while acceding to the request of K-Electric, considering the current inflationary trends, decided to accept the KE request of setting the efficiency factor X as lower of 2% or 30% of increase in CPI for the Generation and Transmission functions and lower of 3% or 30% of increase in CPI for the Distribution function.

30.4 Now K-Electric through its reconsideration submitted that CPI – X indexation is applied to KE's O&M component whereas O&M expense for IPPs is indexed using CPI only. Accordingly, KE has requested that O&M costs for the generation business should only be indexed with CPI. Consequently, the indexation mechanism should

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not account for reduction to induce efficiencies (i.e. indexation based on "CPI" instead of "CPI– X").

30.5 It is observed that although KE has been allowed application of X Factor while allowing indexation on Generation O&M cost in the current MYT, however, it is also a fact that IPPs O&M cost is only indexed based on CPI without application of X Factor. As K-Electric has been allowed a return on its generation assets comparable with IPPs, therefore, it may not be fair with the KE if it's generation O&M cost is indexed by applying X Factor.

30.6 In view thereof, it is decided to not to apply X Factor while allowing annual CPI indexation on generation O&M expense allowed in the tariff control period.

31. **Performance Standards**

31.1 While reviewing the KE's MYT Determination dated March 20, 2017 it was observed that the following text related to performance standard couldn't be incorporated under para 59.4. Therefore, the same shall be read as an integral part of para 59.4 of the Determination.

The Authority is currently in the process of introducing an amendment in the Performance Standards which is expected to be finalized shortly. Meanwhile, KE must follow the already laid Performance Standards (PSDR-2005). However, if the Performance Standards are amended and approved, KE will be obliged to comply with the amended Performance Standards.

32. **Base Rate Adjustment Component**

32.1 In view of the decisions made in the preceding paragraphs, the Authority observed that in order to ensure the allowed overall WACC of 14.10% to K-Electric during the tariff control period, on its existing as well as future investments, the base rate adjustment component needs to be revised which accordingly been revised to Rs.1.0740 per kWh from Rs.1.0590 per kWh.

33. **Claw Back Threshold**

33.1 Since K-Electric has been allowed a base rate adjustment component of Rs.1.0740/kWh, to ensure overall WACC of 14.10%, during the tariff control period, on its existing and future investments, resultantly in initial years of the tariff control period, K-Electric will be earning a return higher than the allowed WACC of 14.10%. By including the Base rate adjustment component, K-Electric will be earning the

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Tariff Control Period						
1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year
23.40%	18.95%	13.31%	11.17%	11.04%	11.04%	11.54%

33.2 Consequent thereupon, the limits for sharing of returns over and above the allowed returns, have been revised as under;

	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th year
25% to be shared with consumers	23.40% - 26.40%	18.95% - 21.95%	13.31% - 16.31%	11.17% - 14.17%	11.04% - 14.04%	11.04% - 14.04%	11.54% - 14.54%
50% to be shared with consumers	26.41% - 29.40%	21.96% - 24.95%	16.32% - 19.31%	14.18% - 17.17%	14.05% - 17.04%	14.05% - 17.04%	14.55% - 17.54%
75% to be shared with consumers	Above 29.41%	Above 24.96%	Above 19.32%	Above 17.18%	Above 17.05%	Above 17.05%	Above 17.55%

The Order part along with all Annexures attached with this determination is intimated to the Federal Government for notification in the official Gazette under Section 31(7) (formerly section 31(4)) of the NEPRA Act.

34. **ORDER**

34.1 The Authority having heard the petitioner, Interveners, Commentators etc. and perusal of the information/ record has determined K-Electric's Multi Year Tariff (MYT) comprising of three separate segments i.e. Generation, Transmission and Distribution in line with the articles of Licenses issued for the respective functions read with the Rule 17(3) (xiii) of the Tariff (Standards and Procedure) Rules, 1998. The segment-wise tariff so determined is indicated hereunder and attached as Annex-I;

K-Electric Tariff w.e.f. July 01, 2016

Tariff Components	Remarks	Rs./kWh	Remarks	Rs./kWh
Generation	At Bus Bar	7.7005	At Units Sold Basis	9.7351
Transmission	At Transmission Sent Outs	0.4962	At Units Sold Basis	0.6192
Distribution	At Units Sold	1.3890	At Units Sold Basis	1.3890
Base Rate Adjustment Component			At Units Sold Basis	1.0740
Tariff applicable w.e.f. July 01, 2016			At Units Sold Basis	**12.8172**

I. K-Electric is allowed to charge tariff from its consumers as indicated in the schedule of tariff attached as Annex -V to this determination.

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II. The period for the Multi Year Tariff shall be of seven years applicable from July 01, 2016 till June 30, 2023.

III. The consumer end tariff shall be subject to the following adjustments;

- The fuel cost component of KE's own generation power plants shall be adjusted in accordance with the mechanism attached herewith as Annex-II.
- The Power Purchase Cost component shall be adjusted in accordance with the mechanism attached herewith as Annex-III.
- The actual payments in respect of WWF and WPPF to the IPPs shall be considered as pass through and shall be adjusted on yearly basis upon production of verifiable documentary evidence.
- The O&M, Depreciation, RORB, Other Income and base rate adjustment components shall be adjusted in accordance with the mechanism attached herewith as Annex-IV.

IV. The following flat thermal efficiencies and heat rates (Net HHV) for K-Electric's own existing generation fleet have been determined, for the Tariff Control Period;

Plant	Heat Rate (Btu/kWh) Net HHV FLAT	Corresponding Efficiency (%)
BQPS-I		
Unit 1	10,802	31.59
Unit 2	10,650	32.04
Unit 3	10,996	31.03
Unit 4	10,899	31.31
Unit 5	10,304	33.11
Unit 6	10,249	33.29
BQPS 2	7,991	42.70
KCCPP	8,497	40.16
KGTPS	8,738	39.05
SGTPS	8,746	39.01

V. The following auxiliary consumption of gross capacity at mean site conditions have been allowed, for the Tariff Control Period;

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Plant Description	Installed Capacity at ISO	Gross Capacity at mean site	Approved Net Capacity at mean site	Auxilary Consumption of gross Capacity
	MW	MW	MW	%
Bin Qasim Power Station (BQPS 1):				
Unit 1	210.00	200.00	183.78	8.11
Unit 2	210.00	200.00	184.00	8.00
Unit 3	210.00	200.00	183.50	8.25
Unit 4	210.00	200.00	183.64	8.18
Unit 5	210.00	200.00	184.50	7.75
Unit 6	210.00	200.00	184.58	7.71
Sub-Total	1,260.00	1,200.00	1,104.00	8.00
Korangi 220 MW CCPP:				
Unit-1-4 Gas Turbine of 48.38 MW each	193.50	187.70		
Unit-5 Steam Turbine	26.50	25.70		
Unit-6 Steam Turbine (New addition)	27.50	26.70		
Sub-Total	247.50	240.10	223.49	6.92
Gas Engines at Korangi Town:				
32 Gas engines of 3.041 MW each	97.31	87.65		
Unit 33 Steam Turbine (New addition)	10.00	9.57		
Sub-Total	107.31	97.21	94.78	2.50
Gas Engines at SITE:				
32 Gas engines of 3.041 MW each	97.31	87.65		
Unit 33 Steam Turbine (New addition)	10.00	9.57		
Sub-Total	107.31	97.21	94.78	2.50
Bin Qasim New CCPP (BQPS 2):				
Unit-1-3 Gas Turbine each of 127.8 MW	383.40	347.10		
Unit-4 Steam Turbine	189.27	181.30		
Sub-Total	572.67	528.40	496.11	6.11
Total	2,294.79	2,162.92	2,013.16	

VI. In case K-Electric decides to lease out any of its existing power plants or Units including Unit 3 and 4 of BQPS-I, before expiry of their useful life, the indexed tariff components for the said plant or Unit i.e. O&M, Depreciation and RoRB components shall be adjusted from the tariff prevalent at the time of leasing out of such power plant/ unit. The O&M, Depreciation and RoRB components in terms of unit 3 & 4 of BQPS-I included in the tariff to be applicable from July 01, 2016 are Rs.0.0367/kWh, Rs.0.0261/kWh and Rs. 0.0230/kWh respectively.

VII. The heat rates of BQPS-II have been determined on the basis of heat rates guaranteed by the EPC contractor. K-Electric has already been directed to conduct heat rate test of BQPS-II and submit the same to the Authority for approval. The adjustment in heat rates will be made based on the results of the performance (Heat Rate) test.

VIII. In view of the addition of steam turbines at KCCP, SGTPS and KGTPS, the numbers in respect of efficiency and auxiliary consumption are worked on provisional basis, based on the given information and supporting documents. K-Electric is directed to conduct heat rate test of KCCP, SGTPS and KGTPS and submit the report to the Authority for approval. The adjustment in heat rates will be made based on the results of the performance (Heat Rate) test.

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IX. Regarding BQPS-I, the parameters allowed by the Authority are provisional and the Authority directs K-Electric to arrange performance test (Heat rate test) by an Independent Engineer within a period of six months from the date of notification of the instant tariff determination. For the selection of independent engineer, KE shall broadly follow the procedure specified in NEPRA (Selection of Engineering, Procurement and Construction Contractor by IPPs) Guidelines, 2017. The tests shall be conducted in the presence of NEPRA professionals as observers. The adjustment in heat rates will be made based on the results of the performance (Heat Rate) test.

X. K-Electric shall arrange heat rate tests by an Independent Engineer within a period of six months from the date of notification of the instant tariff determination. For the selection of independent engineer, KE shall broadly follow the procedure specified in NEPRA (Selection of Engineering, Procurement and Construction Contractor by IPPs) Guidelines, 2017. The tests shall be conducted in the presence of NEPRA professionals as observers. The adjustment in heat rates will be made based on the results of the performance (Heat Rate) test.

XI. For the upcoming power plants or replacement of existing power plants/units, K-Electric shall perform Capacity and Heat Rate tests in a transparent manner by a reputable Independent Engineer to be selected by broadly following the procedure specified in NEPRA (Selection of Engineering, Procurement and Construction Contractor by IPPs) Guidelines, 2017 in the presence of NEPRA professionals at the time of commissioning for the Authority's approval. Till approval of performance test results by the Authority, adjustment in the fuel cost component for the upcoming and replaced power plants shall be allowed based on the heat rates as guaranteed by the EPC contractor subject to adjustment. The adjustment in heat rate will be made only if the heat rate in the test is found lower than the heat rates guaranteed by the EPC contractor. Similarly adjustment in capacity will be made only if the actual capacity pursuant to the performance test is found to be higher than the capacity guaranteed by the EPC contractor. The replacement would mean installation of new power plant/ unit (which as per existing fleet includes but not limited to, turbines, engines etc.) in place of existing power plant/ unit with over all higher net thermal efficiencies.

XII. For the upcoming power plants or replacement of existing power plants/units, no adjustment in tariff except to the extent of Heat rates and Auxiliaries shall be made.

XIII. K-Electric is directed to obtain approval of the Authority for future power acquisition along-with the rates and other terms and conditions for purchase of power from external sources. K-Electric shall not be allowed any adjustment in tariff on account of power purchase cost variation in respect of those power sources for which prior approval of the Authority has not been obtained. For this purpose K-Electric shall submit its request for power acquisition along-with the rationale and relevant documents.

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XIV. The cost of WWF/WWPF related to K-Electric shall be allowed as pass through cost on actual basis subject to provision of verifiable documentary evidence for adjustment on yearly basis to be recovered in the next year.

XV. K-Electric has not been allowed any provision on account of the Doubtful debts in the tariff, however, Bad Debts written off @ 1.69% of K-Electric's assessed sales revenue has been allowed in the base case. For the purpose of actual write offs in future, K-Electric shall complete the following procedures;

i. The defaulter connection to be written off shall be disconnected.
ii. The amount of write off shall be approved by the KE BoD which shall certify that KE has made all best possible efforts to recover the amount being written off.
iii. KE Auditors shall verify that the amount is non-recoverable notwithstanding the efforts of the company.
iv. The terms of write off shall also be given in detail.
v. In case any amount written off is subsequently recovered from the customer, the recovered amount shall be adjusted in next year's tariff.

XVI. K-Electric has not been allowed the impact of Revaluation on its Regulatory Assets Base while working out the Depreciation charges and Return on Rate Base.

XVII. Other Income, excluding the impact of Late Payment charges (LPC), Interest on Bank Deposits and Meter Rent, has been deducted from the base case assessment.

XVIII. K-Electric shall pay interest earned on security deposits to the consumers through electricity bills.

XIX. K-Electric shall not charge bank collection charges from the consumers separately in their bills.

XX. K-Electric is directed to stop charging of meter rent in future from those consumers who pay their cost of meter. In case of any meter replacement, owing to fault of consumers, the matter shall be dealt with as per the relevant provisions of the CSM.

XXI. K-Electric is hereby allowed a total investment of Rs.298,915 million for the seven years tariff control period for its Generation, Transmission and Distribution Systems as given hereunder;

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Investment Allowed

Functions	Rs. In Million
Generation	97,305
Transmission	127,942
Distribution	73,668
Total	**298,915**

XXII. K-Electric shall place relevant documentary record of its additional investment decisions on its official website for information of the consumers.

XXIII. A midterm review to the extent of allowed Investments only shall be carried out, after completion of three and a half (3.5) years of the tariff control period.

i. In case of under investment /performance by K-Electric, the base rate adjustment component may be adjusted, keeping in view the amount of Investment allowed vis a vis actual investment made by K-Electric during the period, after thorough analysis and review by the Authority. Similarly, for the last three and a half (3.5) years of the tariff control period, adjustment of base rate adjustment component, may be made in the next tariff determination, keeping in view the amount of Investment allowed vis a vis actual investment made by K-Electric during the period, after thorough analysis and review by the Authority. For clarity purpose, a self-explanatory adjustment mechanism has been attached as Exhibit-I.

ii. In case KE wants to bring more investment to outperform the regulatory targets in Transmission & Distribution (T&D) segments then KE shall be allowed to retain the gains over and above the approved T&D loss target. Hence there shall be no revision in the T&D losses benchmarks and base rate adjustment component, implying that no cost of funds/WACC shall be allowed for that additional investment. Accordingly it would be KE's own commercial decision for these additional investments.

iii. In case, KE achieves Authority's given T&D segments targets with additional investment then that additional investment wouldn't be allowed cost of funds/WACC. Meaning thereby no revision shall be made in the base rate adjustment component.

iv. In case, KE does not meet the T&D segments targets and still end up making additional investment then such additional investment would be construed as inefficient for which again no adjustment shall be made in

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the base rate adjustment component. Thus consumers would be protected from any such decisions with non-attainment of required targets.

v. Any additional investment in the generation sector would be allowed, keeping in view the prudent cost, changing technology and regional and international comparable benchmarks. Therefore, prior approval of new investment in generation segment other than the allowed 450 X 2 MW RLNG plant (BQPS-III) shall have to be obtained from the Authority. The Authority would accordingly decide on the issue and if allowed, would adjust the base rate adjustment component to the extent of that additional investment. Pertinent to mention that unlike past, KE shall not be allowed to retain the generation efficiency gains in this regard.

vi. To the contrary, if the regulatory targets in T & D segment are met with by employing resources efficiently and diligently and hence meeting the regulatory targets at a cost less than the allowed limit, then no revision shall be done in the base rate adjustment component. Thus KE shall be allowed to keep the savings.

vii. In case KE does not carry out committed investment (as mentioned in para 28.30.19 of the Determination) and does not meet the regulatory benchmarks set in transmission and distribution segment then the base rate adjustment component would be revised accordingly to reflect the under investment made by KE.

viii. In case, KE manages to build the BQPS-III power plant at a cost less than the cost allowed by the Authority then KE shall be allowed to retain the savings by not adjusting the base rate component.

ix. In case KE abandon its plan to setup BQPS-III, then base rate adjustment component will be adjusted downward accordingly.

XXIV. The midterm review will be an appropriate time to evaluate on the effective realization of the investment plan. However, at the same time, to protect the consumer's interest, KE shall be required to submit annual investment progress reports. The purpose is to oversee the physical aspect of the investment plan and its correlation with the allowed regulatory targets.

XXV. K-Electric has been allowed the following target of T&D losses during the tariff control period;

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	Tariff Control Period						
FY	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year
Allowed T&D Losses (%)	20.90%	19.80%	18.75%	17.76%	16.80%	15.95%	15.36%

XXVI. Profit Claw Back Mechanism shall become applicable, if the regulated EBIT of K-Electric exceeds the following thresholds in the respective year and shall be determined as prescribed in the Annex-VII.

Tariff Control Period						
1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year
23.40%	18.95%	13.31%	11.17%	11.04%	11.04%	11.54%

XXVII. The limits for sharing of returns over and above the allowed returns, have been revised as under;

	1st Year	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**	**6th Year**	**7th year**
25% to be shared with consumers	23.40% - 26.40%	18.95% - 21.95%	13.31% - 16.31%	11.17% - 14.17%	11.04% - 14.04%	11.04% - 14.04%	11.54% - 14.54%
50% to be shared with consumers	26.41% - 29.40%	21.96% - 24.95%	16.32% - 19.31%	14.18% - 17.17%	14.05% - 17.04%	14.05% - 17.04%	14.55% - 17.54%
75% to be shared with consumers	Above 29.41%	Above 24.96%	Above 19.32%	Above 17.18%	Above 17.05%	Above 17.05%	Above 17.55%

XXVIII. The X-Factor shall be applicable as lower of 2% or 30% of change in CPI for the Transmission functions and lower of 3% or 30% of change in CPI for the Distribution function.

XXIX. Terms and Conditions of supply of K-Electric have been modified in line with the terms and conditions of supply for XWDISCOs as prescribed in Annex-VI.

XXX. The issue of new connection charges shall be decided through separate proceedings with consultation of all the relevant stakeholders. Till such time K-Electric shall ensure that other connection charges pertaining to new connections to the prospective consumers are comparable with the XWDISCOs preferably LESCO.

XXXI. The Authority may review the tariff applicable to each class of consumers for rationalization or modification from time to time as deemed appropriate, in such a manner that the overall rate would remain the same.

XXXII. K-Electric shall ensure that;

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a. All existing consumers having sanctioned load of more than 5kW and above shall be provided ToU metering arrangement within three months from the date of notification of this decision and shall be billed on ToU rates.

b. All new consumers having sanctioned load of 5kW and above shall be provided ToU metering arrangement with immediate effect and shall be billed on ToU rates.

c. To start billing immediately on ToU rates to the consumer who have already been provided with ToU meters.

XXXIII. Reference CPI for allowing future CPI-X indexations is 205.99 as on May 31, 2016.

XXXIV. Furnace oil price of Rs.27,744/Metric Ton has been assumed to work out the Fuel cost component of K-Electric's own power plants.

XXXV. Gas price has been assumed as Rs.613/mmbtu.

XXXVI. For the power purchase cost (Fuel, O&M and Capacity charges), the actual cost for the month of June, 2016 has been taken as reference.

XXXVII. Any corporate tax liability to the extent of current tax paid (without the impact of deferred tax impact) would be treated as pass through and shall be allowed through adjustment in the tariff.

XXXVIII. All components of the tariff shall be adjusted with yearly allowed target of T&D losses.

XXXIX. K-Electric is allowed to charge the users of its system a "Use of system charge" (UOSC) equal to:

i) Where 220kV, 132 kV and 66kV system is involved;

$$UOSC = TM(Gross) \times \frac{(1-L)}{(1-0.013)} \quad Paisa/kWh$$

ii) Where only 11 kV distribution systems is involved;

$$UOSC = DM(Gross) \times \frac{(1-L)}{(1-0.062)} \times \mathrm{AFA(D)} \quad Paisa/kWh$$

iii) Where Transmission Network along with 11 kV distribution systems are involved;

$$UOSC = TM + DM(Gross) \times \frac{(1-L)}{(1-0.075)} \times \mathrm{AFA(TD)} \quad Paisa/kWh$$

Where;

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Gross Transmission Margin for FY 2016-17 is set at Rs. 0.6192/kWh to be adjusted on respective year regulatory assessments.

Gross Distribution Margin for FY 2016-17 is set at Rs. 1.6970/kWh (without taking the impact of other income) to be adjusted on respective year regulatory assessments.

Gross Transmission & Distribution Margin for FY 2016-17 is set at Rs.2.3162/kWh (without excluding impact of other income) to be adjusted on respective year regulatory assessments

'L' is the overall percentage loss assessment for the respective year.

AFA (D) = Adjustment factor for assets at 11 kV level i.e. 42%.

AFA (TD) =Adjustment factor for assets at Transmission Network along with 11 kV level i.e. 67%.

XL. K-Electric shall be obligated for adjustment/ recovery of any /all amounts in respect of matters currently pending in the courts or with the Authority or arising out in future pertaining to previous MYT determination /decisions of the Authority. The Authority in such cases shall prescribe the method of recovery/adjustment of such costs /claims based on its decision in the matter.

XLI. K-Electric is directed to provide net metering arrangement to the consumers in accordance with the applicable provisions of NEPRA (Alternative and Renewable Energy) Distributed Generation and Net Metering Regulations, 2015.

XLII. No adjustment on account of variation in KIBOR and LIBOR shall be allowed to K-Electric during the tariff control period.

XLIII. Notwithstanding anything contained above, the said tariff determination and any rate or charge or terms and condition thereof approved by the Authority shall be subject to NEPRA Act as amended from time to time.

XLIV. This determination, order, rate, charge, terms and condition and any methodology to arrive at the said rate or charge including but not limited to methodology related to performance based regime etc. provided herein shall be limited to the tariff control period and shall not bind the Authority in any way or create any legitimate expectancy in favor of KE, for future tariff determinations and the Authority in the subsequent control period reserves the right to change alter, amend or modify any basis,

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methodology in the interest of the consumers and to ensure the sustainability of supply of electricity in accordance with the NEPRA Act.

XLV. The Summary of Directions;

1. To stop charging bill collection charges separately from the consumers in future.

2. To pay interest on security deposits to the consumers through their bills in future.

3. To stop charging of meter rent in future from those consumers who pay their cost of meter

4. To provide following information regarding 900 MW BQPS-III RLNG Power plant within 30 days of the issuance of instant MYT determination:

   i. Make, Model & Type of Technology.

   ii. OEM and EPC guaranteed figures for net LHV flat thermal efficiency (at mean site conditions) on RLNG and HSD (if applicable) based on simple and combined cycle mode of operation.

   iii. OEM and EPC guaranteed figures for net capacity along with auxiliary consumption (at mean site conditions) on RLNG and HSD (if applicable) based on simple and combined cycle mode of operation.

   iv. Degradation and part-load adjustment factors provided by OEM for the major individual components and overall plant.

   v. Clear time lines regarding COD on open cycle and on combined cycle mode.

5. To apply the weighted average method for calculation of monthly F.O in its future adjustments to the Authority.

6. To develop and share its plans/ recommendations regarding competitive market regime in consultation with CPPA-G within a period of two years.

7. To follow grid code strictly and to build a state of the art real time online dispatch, control and monitoring center having a dedicated software with the objective of determining the most efficient, low-cost and reliable operation of a power system by dispatching the available electricity generation resources to supply the load on the system so as to achieve the objective to minimize the total cost of generation.

8. K-Electric is directed to take up the matter regarding payments from Strategic consumers with the GoP and a mechanism with respect to recoveries of arrears along-with future payments must be covered and clearly elaborated in the Implementation Agreement.

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Annex-I

Detial of Tariff FY 2016-17

Description	Unit	FY 17		
		Mln. Rs.	*Rs. /kWh (Unit Sent Out)*	*Rs. /kWh (Unit Sold)*
GENERATION				
K.E System	[GWh]	9,114		
Power Purchase	[GWh]	2,934		
NTDC	[GWh]	5,409		
	[GWh]	**17,458**		
Fuel Cost				
K.E System		51,090	2.9265	3.6998
Power Purchase (IPPs, etc.)		17,703	1.0140	1.2820
CPPA-G		21,790	1.2482	1.5780
		90,583	**5.1888**	**6.5598**
Generation O&M & Capacity				
K.E System		5,817	0.3332	0.4212
Power Purchase (IPPs, etc.)		7,538	0.4318	0.5459
CPPA-G		13,478	0.7720	0.9760
		26,833	**1.5370**	**1.9431**
Depreciation		3,864	0.2213	0.2798
RORB		13,152	0.7534	0.9524
Generation Total		**134,432**	**7.7005**	**9.7351**
TRANSMISSION				
Units Purchased	[GWh]	17,458		
Transmission Loss (%)		1.3%		
Units Lost	[GWh]	227		
Units Sent Out	[GWh]	**17,231**		
O&M		2,941	0.1707	0.2130
Depreciation		1,369	0.0795	0.0991
RORB		4,240	0.2461	0.3070
Transmission Total		**8,550**	**0.4962**	**0.6192**
DISTRIBUTION				
Units Purchased	[GWh]	17,231		
Distribution Loss (%)		19.86%		
Units Lost	[GWh]	3,422		
Units Sent/Sold	[GWh]	**13,809**		
O&M		15,699	1.1369	1.1369
Bad Debts		2,941	0.2130	0.2130
Depreciation		2,189	0.1585	0.1585
Other Income		(4,253)	(0.3080)	(0.3080)
RORB		2,605	0.1886	0.1886
Distribution Total		**19,181**	**1.3890**	**1.3890**
Base Rate Adjustment Component		***14,830***		***1.0740***
Avg. Sale Rate		**176,992**		**12.8172**

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MECHANISM FOR ADJUSTMENT IN TARIFF DUE TO VARIATION IN FUEL PRICE

1. The fuel cost component of tariff of KE's own generation power plants shall be adjusted due to change in fuel prices, generation mix and volume. KE shall be allowed adjustment in this tariff component on monthly and quarterly basis.

Adjustments on Monthly Basis

2. The change in KE own generation's fuel cost component due to variation in fuel prices, generation mix and volume shall be passed on to the consumers of KE directly in their monthly bills in the form of Fuel Charges Adjustment ("FCA"). Following steps shall be followed to calculate these variations;

   i. The monthly fuel cost of each power plant/unit (on each fuel in case of dual fuel power stations) in KE's own generation system will be calculated based on actual units generated based on the target of heat rates and auxiliary consumption, approved by the Authority, as per the following formula;

$$CoF = (GBB \times HR \times FP_{(CM)})$$

CoF	=	Cost of Fuel of each power station/unit in Million Rupees
GBB	=	Generation at Bus Bar of power station after its approved auxiliary consumption expressed in GWh
HR	=	The approved heat rate for each power station/unit in BTUs/kWh at Bus Bar.
$FP_{(CM)}$	=	Price of fuels for the current month converted into Rs./BTUs. The price of gas as notified by the relevant Authority shall be used. In case of deregulated fuels, the prices shall be verified from the documentary evidences to be submitted by KE. The conversion in BTUs shall be made based on calorific value approved by the Authority. For the determined fuel component in this tariff determination, the furnace oil and gas prices of Rs, 27,744/Metric ton and Rs. 613/MMBTu respectively have been used as reference. Calorific value of 40,351 BTUs/kg for furnace oil has been used.

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Note: For dual fuel power plants/units, total fuel cost shall be calculated totaling the cost of energy generated on each fuel.

ii. The fuel cost of each power station shall be totaled to arrive at monthly fuel cost of KE's whole generation fleet.

$$TCoF_{(WG)} = CoF1 + CoF2 + CoF3 \ldots\ldots CoF_N$$

$TCoF_{(WG)}$	=	Total Cost of Fuel in Million Rupees of whole generation fleet of KE
COF1	=	Cost of Fuel in Million Rupees of 1st power plant/unit
COF2	=	Cost of Fuel in Million Rupees of 2nd power plant/unit
COF3	=	Cost of Fuel in Million Rupees of 3rd power plant/unit
CoF_N	=	Cost of Fuel in Million Rupees of Nth power plant/unit

iii. The weighted average fuel cost shall be worked out by dividing the total fuel cost of whole generation fleet of KE with the total units sent out (both own generation and power purchases) by KE in that month.

$$WAFC_{(WG)} = TCoF_{(WG)} / TUSO$$

$WAFC_{(WG)}$	=	Weighted Average Fuel cost of KE's whole generation fleet in Rs./kWh
$TCoF_{(WG)}$	=	Total Cost of Fuel in Million Rupees of whole generation fleet of KE
TUSO	=	Total Units Sent Out based on targeted auxiliaries (KE's own generation + Power Purchases) in GWh

iv. The computed monthly weighted average cost shall be compared with the reference weighted average cost to compute monthly FCA portion of change in KE own generation's fuel component. The formula is produced below;

$$FCA(OG) = \{WAFC_{(WG)(CM)} - WAFC_{(WG)(RM)}\}$$

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FCA(OG)	=	The required Increase/ (Decrease) in Rs./kWh in fuel cost component of KE's own generation for the current month over the last month of the previous quarter to be reflected in the monthly bills of consumers as part of Fuel Charges Adjustment.
WAFC (WG) (CM)	=	Weighted Average Fuel cost of KE's whole generation fleet of the Current Month in Rs./kWh
WAFC (WG) (RM)	=	Weighted Average Fuel cost of KE's whole generation fleet of the Reference Month in Rs./kWh

v. For the purpose of above adjustment the Current Month would mean the month for which adjustment is required and the Reference Month would mean the last month of the preceding quarter.

vi. For the purpose of adjustment for the months from July 01, 2016 to September, 2016, the determined fuel cost component of Rs.2.9265/kWh, calculated on total units sent out basis, shall be used as reference.

vii. The generation at Bus bar for each power station/unit shall be worked out after subtracting the auxiliary consumption, set by the Authority, from the gross generation for each generating unit/power station.

viii. The price of furnace oil shall be worked out on the basis of monthly weighted average method taking into account the opening stock, monthly purchases and closing stock. The price of gas as notified by the relevant Authority shall be used to calculate the cost and corresponding variations. In case of other fuels, the costs and variations shall be computed using prices that are either notified by the relevant Authority or based on the documentary evidences submitted by KE.

ix. In case it is not possible to calculate energy on each fuel for the dual fuel power stations then the energy generated shall be worked out based on proportionate BTUs consumed (based on Authority's benchmark calorific value) of each fuel.

x. The calorific value of furnace oil has been set as 40,351 BTUs/Kg. No variations in the calorific value shall be allowed on actual basis during the tariff control period. The calorific value of other fuels shall be approved by the Authority before allowing variation thereon.

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xi. K-Electric shall submit its monthly adjustment request within seven days following the current month. The request shall be submitted on a prescribed format as provided in this Mechanism. KE shall submit the following information/data for verification.

- Complete monthly data showing plant/unit wise gross generation, actual auxiliary consumption, fuel consumption, installed capacity, de-rated capacity, plant availability, power dispatched and system demand data.
- Fuel stock position (opening and closing), Furnace Oil/Gas/Other Fuels purchased during a month along with duly verified copies of purchase orders.
- KE shall be obligated to provide any additional information, if required, during the processing of the relevant adjustment request.

xii. The approved monthly FCA shall be notified by the Authority and shall be charged in the month intimated by the Authority in the respective monthly FCA decision. The determined FCA shall be charged on the basis of units consumed by each consumer in the month for which it is calculated.

xiii. K-Electric in its FCA request shall certify that data provided is accurate and plants have been operated following economic despatch.

<u>Adjustment on quarterly basis.</u>

xiv. The impact of monthly variations in Million Rupees in KE own generation's fuel cost component to the extent of targeted T&D losses, not taken into account in the monthly FCAs, shall be adjusted on quarterly basis, i.e. approved respective monthly FCA times the total units sent out multiplied by the allowed level of T&D losses. The impact of these variations shall be worked out based on targeted units to be sold in the next quarter and shall be adjusted in the Schedule of Tariff of KE. Upon recovery of the allowed variations, this impact shall be reversed in the next quarterly adjustment.

xv. Furthermore, in order to bring KE's tariff on current level of fuel prices, the KE own generation's fuel cost component shall be adjusted at the price level of last month of each quarter. The weighted average fuel cost of last month of quarter under consideration shall be

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compared with the weighted average fuel cost of reference month of last quarter to work out this impact. The resultant variations in terms of Rs./kWh shall be adjusted in the SOT of KE. For the purpose of adjustment for the quarter July 01, 2016 to September, 2016, the fuel cost component of Rs.3.6998/kWh, calculated on units sold basis, shall be used as reference.

xvi. The determined fuel cost component shall also be adjusted with the target of yearly T&D losses while making the adjustment for the quarter April-June every year.

xvii. The aforesaid quarterly adjustments shall be made in the consumer end tariff using following yearly target of T&D losses;

FY	2016	2017	2018	2019	2020	2021	2022	2023
Loss Reduction (%)	22.10	20.90	19.80	18.75	17.76	16.80	15.95	15.36

xviii. K-Electric shall submit the quarterly adjustment request within fifteen days (15), following the last month of each quarter.

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MECHANISM FOR ADJUSTMENT OF FUEL PRICE VARIATIONS

Generation on Gas, F.O and Others at Bus Bar	Unit	Reference month	Current Month
Bin Qasim Power Station Unit-I Bin Qasim Power Station Unit-II Bin Qasim Power Station Unit-III Bin Qasim Power Station Unit-IV Bin Qasim Power Station Unit-V Bin Qasim Power Station Unit-VI Korangi Gas Turbine Power Station SITE Gas Turbine Power Station Bin Qasim Power Station-II CCPP Korangi Combined Cycle Power Station New Power Station(s)	GWh		
Total			
Price of Fuel			
Gas	(Rs/MMBTu)		
Furnace	(Rs/M.Ton)		
Others			
Approved Heat Rates at Bus Bar-Gas, F.O, Others			
Bin Qasim Power Station-I Bin Qasim Power Station Unit-II Bin Qasim Power Station Unit-III Bin Qasim Power Station Unit-IV Bin Qasim Power Station Unit-V Bin Qasim Power Station Unit-VI Korangi Gas Turbine Power Station SITE Gas Turbine Power Station Bin Qasim Power Station-II CCPP Korangi Combined Cycle Power Station New Power Station(s)	BTU/kWh		
Cost of Fuels (Gas, F.O, Total , Others)			
Bin Qasim Power Station-I Bin Qasim Power Station Unit-II Bin Qasim Power Station Unit-III Bin Qasim Power Station Unit-IV Bin Qasim Power Station Unit-V Bin Qasim Power Station Unit-VI Korangi Gas Turbine Power Station SITE Gas Turbine Power Station Bin Qasim Power Station-II CCPP Korangi Combined Cycle Power Station New Power Station(s)	Mln Rs.		
Total Cost of Fuel	Mln Rs.		
Weighted Average Cost- Current Month	Rs./kWh		
Less Weighted Average Cost- Reference Month	Rs./kWh		
Required Increase/Decrease- KE's Own Generation	Rs./kWh		

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Annex-III

MECHANISM FOR ADJUSTMENT IN TARIFF DUE TO VARIATION IN POWER PURCHASE PRICE ("PPP")

1. This mechanism shall be applicable to make adjustments in the PPP component of KE's tariff due to variation in fuel prices, energy mix, inflation, exchange rate etc. on monthly and quarterly basis.

Adjustment on Monthly Basis

2. The change in the fuel component of PPP due to variation in fuel prices and energy mix shall be passed on to the consumers of KE directly in their monthly bills in the form of FCA. Following steps shall be followed to calculate these variations;

   i. The actual fuel cost of each power station/source, determined/approved by the Authority, shall be totaled to arrive at monthly total fuel cost of all the power stations.

$$TCoF_{(WPPP)} = CoF1 + CoF2 \ldots\ldots CFN$$

TCoF (WPPP)	=	Total Cost of Fuel in Million Rupees of all external generation sources
COF1	=	Cost of Fuel in Million Rupees of 1st power plant/unit
COF2	=	Cost of Fuel in Million Rupees of 2nd power plant/unit
COFN	=	Cost of Fuel in Million Rupees of Nth power plant/unit

   ii. The weighted average fuel cost of the PPP shall be worked out by dividing the total fuel cost with the total units sent out (both own generation and power purchases) by KE in that month.

$$WAFC\ (WG) = TCoF\ (WG) / TUSO$$

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WAFC (WPPP)	=	Weighted Average Fuel cost of all external generation sources in Rs./kWh
TCoF (WPPP)	=	Total Cost of Fuel in Million Rupees of all external generation sources
TUSO	=	Total targeted Units Sent Out (KE's own generation+ Power Purchases) in GWh

iii. The computed monthly weighted average fuel cost shall be compared with the reference weighted average fuel cost to compute the PPP fuel component part of FCA. The formula is produced below;

$$\text{FCA-PPP} = \{\text{WAFC}_{(\text{WPPP})(\text{CM})} - \text{WAFC}_{(\text{WPPP})(\text{RM})}\}$$

FCA-PPP	=	The required Increase/ (Decrease) in PPP's fuel cost component for the current month over the reference month to be reflected in the monthly bills of consumers as part of Fuel Charges Adjustment.
WAFC (WPPP) (CM)	=	Weighted Average Fuel cost component of PPP of the Current Month
WAFC (WPPP) (RM)	=	Weighted Average Fuel cost component of PPP of the Reference Month

iv. For the purpose of above adjustment, the Current Month would mean the month for which adjustment is required and the Reference Month would mean the last month of the preceding quarter. For the purpose of adjustment for the months from July 01, 2016 to September, 2016, the fuel cost component of PPP of Rs. 2.2622/kWh, calculated on units sent out basis, shall be used as reference.

v. The monthly adjustment shall be restricted to the fuel component of PPP and shall be passed on to the consumers as part of FCA in accordance with the above formula.

vi. K-Electric shall, within seven days following the Current Month, request for FCA to compensate for variations in fuel component of PPP. The request shall be submitted on a prescribed format as provided in this Mechanism.

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vii. KE shall submit the following information/data for verification.

- Complete monthly data showing power purchased in GWh, installed capacity, de-rated capacity, plant availability, power dispatched and system demand data.
- Duly verified copies of invoices raised by each external source of power along with duly verified copies of their purchase orders/bill stickers.
- K-Electric shall also provide separate workings/indexations for all the tariff components along with the applicable currency exchange rate, US CPI etc. in accordance with approved determination/power purchase agreement.
- KE shall be directed for the provision of any additional information, if required, during the processing of relevant adjustment request

viii. The approved monthly FCA shall be notified by the Authority and shall be charged in the month intimated by the Authority in the respective monthly decision. The determined FCA shall be charged on the basis of units consumed by each consumer in the month for which FCA is calculated.

Adjustment on quarterly basis.

ix. The impact of monthly variations in Million Rupees in fuel cost component of PPP to the extent of targeted T&D losses, not taken into account in the monthly FCAs, shall be adjusted on quarterly basis. The impact of these variations shall be worked out based on targeted units to be sold in the next quarter and shall be adjusted in the SoT of KE. Upon recovery of the allowed variations, this impact shall be reversed.

x. In addition, the monthly variations in Million Rupees in the variable O&M and fixed costs, as allowed by the Authority, shall be adjusted on quarterly basis using weighted average method on targeted units sold basis. The impact of these variations shall be worked out based on targeted units to be sold in the next quarter and shall be adjusted in the SoT of KE. Upon recovery of the allowed variations, this impact shall be reversed. For the purpose of these adjustments for the quarter July 01, 2016 to September, 2016, the O&M and capacity charges components of Rs. 1.5219/kWh, calculated on units sold basis, shall be used as reference.

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xi. Furthermore, in order to bring KE's tariff on current level of prices, each cost component of PPP shall be adjusted at the price level of last month of each quarter. The total weighted average PPP of last month of quarter under consideration shall be compared with the total weighted average PPP of reference month of the last quarter to work out this impact. For the purpose of these adjustments for the quarter July 01, 2016 to September, 2016, the PPP of Rs. 4.3819/kWh, calculated on units sold basis, shall be used as reference.

xii. The determined PPP component shall also be adjusted with the target of yearly T&D losses while making the adjustments for the quarter April-June every year.

xiii. The net quarterly variation in the power purchase cost (Fuel + Fixed part) shall be adjusted in the consumer end tariff based on the following yearly target of T&D losses.

FY	2016	2017	2018	2019	2020	2021	2022	2023
Loss Reduction (%)	22.10	20.90	19.80	18.75	17.76	16.80	15.95	15.36

xiv. K-Electric shall submit the quarterly adjustment request within fifteen days (15), following the last month of each quarter. K-Electric shall be entitled to monthly/quarterly adjustment of PPP only from such sources whose tariffs are determined/approved by the Authority. The approved tariff of wind/solar power projects shall only be allowed variations on quarterly basis.

xv. The actual payments in respect of WWF and WPPF to the IPPs shall be considered as pass through and shall be adjusted on yearly basis upon production of verifiable documentary evidences. Upon recovery of the same, the impact of these items shall be reversed.

xvi. For the purpose of above adjustment the Current Quarter would mean the quarter for which adjustment is required and the Reference Quarter would mean the quarter preceding the Current Quarter.

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xvii. The approved quarterly adjustment in tariff along with the revised schedule of tariff shall be sent to GoP for notification.

MECHANISM FOR CALCULATIONS OF POWER PURCHASE COST VARIATIONS

Generation at Bus Bar	**Unit**	**Reference month**	**Current Month**
Tapal Gul Ahmed NTDC KANUPP PASMIC Others	GWh		
Total			
Rate of Power Purchase	**Unit**	**Last month**	**Current Month**
Tapal Gul Ahmed NTDC KANUPP PASMIC Others	Rs./ kWh		
Total			
Total Cost of Power Purchase			
Tapal Gul Ahmed NTDC KANUPP PASMIC Others	Mln. Rs.		
Weighted Average Cost- Current Month	Rs./kWh		
Weighted Average Cost- Reference Month	Rs./kWh		
Required Increase/Decrease in the consumer end tariff	Rs./kWh		

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MECHANISM FOR ADJUSTMENT OF O&M, BAD DEBTS, BASE RATE ADJUSTMENT COMPONENT, OTHER INCOME, DEPRECIATION AND RETURN COMPONENTS

1. This mechanism shall be applicable to make adjustments in the O&M cost components of KE's tariff. The breakup of approved O&M cost components for the generation, transmission and distribution segments adjusted for FY 2016-17 of KE is indicated in the following table;

TABLE - I

O&M Component	Symbol	Component (Rs/kWh)
(1)	(2)	(3)
Generation owned by K-Electric	Go	0.4212
Transmission	To	0.2130
Distribution	Do	1.1369
Total Rate		**1.7711**

2. The productivity/efficiency factor (X factor) for future years as applicable to O&M component relating to each segment of transmission and distribution will be;

X factor = lower of 2% or 30% of change in CPI for Transmission functions and lower of 3% or 30% of change in CPI for Distribution function

3. The O&M component of each segment (Transmission and Distribution) of Tariff shall be varied to the extent of the change in CPI as per the following formula;

$$OM_I = OMo * \{1 + ((C_{PN}-C_{PO})/C_{PO}) - X\ factor)\}$$

OM_I	=	Revised O&M Component of each segment
OMo	=	Reference O&M Component of each segment
CPN	=	New CPI (CPI General as notified by the Pakistan Bureau of Statistics for the month of May each year)
CPO	=	Reference CPI (CPI General as notified by the Pakistan Bureau of Statistics for the month of May of the previous year)
X	=	Respective efficiency factor, for the concerned component as per Para 2

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4. The O&M component of Generation segment of Tariff shall be varied to the extent of the change in CPI as per the following formula;

$$OM_I = OMo * \{1 + ((C_{PN}-C_{PO})/C_{PO})\}$$

OMI	=	Revised O&M Component of Generation segment
OMo	=	Reference O&M Component of Generation segment
CPN	=	New CPI (CPI General as notified by the Pakistan Bureau of Statistics for the month of May each year)
CPO	=	Reference CPI (CPI General as notified by the Pakistan Bureau of Statistics for the month of May of the previous year)

5. For the purpose of initial indexation falling due on July 01, 2017 the new CPI will be that of May 2017, the previous O&M components of the tariff shall be as indicated in Table-1 above and the previous CPI shall be that of May, 2016 i.e. 205.99 as notified by the Federal Bureau of Statistics (FBS).

6. The above tabulated O&M components have been adjusted with T&D losses of 20.90% applicable for the financial year 2017. These components, after making aforesaid indexation, shall also be adjusted with yearly losses, as targeted in this determination. The formula for adjustment on new losses shall be as follows;

$$OM_{ADJ} = OM_I * (1-TL_{(PY)})/ (1-TL_{(NY)})$$

OM_{ADJ}	=	Adjusted O&M Component to be applicable in the next year of each segment (Generation, Transmission & Distribution)
OM_I	=	Revised O&M Component of each segment (Generation, Transmission & Distribution)
$TL_{(PY)}$	=	Target of Losses in the Previous Year
$TL_{(NY)}$	=	Target of Losses in the Next Year

7. The adjusted O&M components of tariff resulting from application of CPI indexation and loss adjustment applicable from July 01, 2017 shall become the reference O&M component for application of indexation on July 01, 2018. The CPI as of May, 2017 shall become the previous CPI and the new CPI shall be that of May, 2018 for applying indexation on July 01, 2017. The same procedure will be repeated for the subsequent yearly indexation.

8. The aforesaid variation in the O&M components of tariff i.e. Generation, Transmission & distribution shall be aggregated to form the resulting variation in average sale rate that shall be applied to all categories of consumers.

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9. The determined Return, Base Rate Adjustment, Other Income, Bad Debt and Depreciation components of the tariff of KE shall remain fixed throughout the control period, except for adjustment with the yearly target of T&D losses.

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Annex-V

SCHEDULE OF ELECTRICITY TARIFF
FOR K-ELECTRIC LIMITED
DETERMINED FOR THE FY 2016-17

A-1 GENERAL SUPPLY TARIFF - RESIDENTIAL

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
a)	For Sanctioned load less than 5 kW			
i	Up to 50 Units	-	4.00	
	For Consumption exceeding 50 Units			
ii	1- 100 Units	-	9.10	
iii	101- 200 Units	-	10.70	
iv	201- 300 Units	-	12.25	
v	301- 700 Units	-	13.95	
vi	Above 700 Units	-	16.30	
b)	For Sanctioned load 5 kW & above			
			Peak	Off-Peak
	Time Of Use	-	16.50	12.27

As per decision of the Authority, residential consumers will be given benefit of only one previous slab.
Consumption exceeding 50 units but not exceeding 100 units will be charged under the 1-100 slab.
Under tariff A-1, there shall be minimum monthly customer charge at the following rates even if no energy is consumed.

a) Single Phase Connections: Rs. 75/- per consumer per month
b) Three Phase Connections: Rs. 150/- per consumer per month

A-2 GENERAL SUPPLY TARIFF - COMMERCIAL

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
a)	For Sanctioned load less than 5 kW		13.25	
b)	For Sanctioned load 5 kW & above	400.00	12.50	
			Peak	Off-Peak
c)	Time Of Use	400.00	16.50	12.27

Under tariff A-2, there shall be minimum monthly charges at the following rates even if no energy is consumed.

a) Single Phase Connections; Rs. 175/- per consumer per month
b) Three Phase Connections: Rs. 350/- per consumer per month

A-3 GENERAL SERVICES

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
a)	General Services	-	13.45

Under tariff A-3, there shall be minimum monthly charges at the following rates even if no energy is consumed.

a) Single Phase Connections; Rs. 175/- per consumer per month
b) Three Phase Connections: Rs. 350/- per consumer per month

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B INDUSTRIAL SUPPLY TARIFFS				
Sr. No.	**TARIFF CATEGORY / PARTICULARS**	**FIXED CHARGES Rs/kW/M**	**VARIABLE CHARGES Rs/kWh**	
B1	Upto 25 kW (at 400/230 Volts)	-		13.50
B2(a)	25-500 kW (at 400 Volts)	400.00		12.65
B3(a)	For all loads upto 5000 KW (at 11,33 kV)	380.00		12.50
B4(a)	For all loads upto 5000 KW (at 66,132 kV)	360.00		12.00
	Time Of Use		Peak	Off-Peak
B1(b)	Upto 25 kW (at 400/230 Volts)	-	16.50	12.50
B2(b)	25-500 kW (at 400 Volts)	400.00	16.50	12.00
B3(b)	For All Loads up to 5000 kW (at 11,33 kV)	380.00	16.50	11.50
B4(b)	For All Loads (at 66,132 kV & above)	360.00	16.50	11.25
B5	For All Loads (at 220 kV & above)	340.00	16.50	10.50

For B1 consumers there shall be a fixed minimum charge of Rs. 350 per month.
For B2 consumers there shall be a fixed minimum charge of Rs. 2,000 per month.
For B3 consumers there shall be a fixed minimum charge of Rs. 50,000 per month.
For B4 consumers there shall be a fixed minimum charge of Rs. 500,000 per month.
For B5 consumers there shall be a fixed minimum charge of Rs. 1000,000 per month.

C - SINGLE-POINT SUPPLY FOR PURCHASE IN BULK BY A DISTRIBUTION LICENSEE AND MIXED LOAD

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
C -1	For supply at 400/230 Volts			
a)	Sanctioned load less than 5 kW	-		13.50
b)	Sanctioned load 5 kW & up to 500 kW	400.00		12.50
C -2(a)	For supply at 11,33 kV up to and including 5000 kW	380.00		12.50
C -3(a)	For supply at 132 and above, up to and including 5000 kW	360.00		12.00
	Time Of Use		Peak	Off-Peak
C -1(c)	For supply at 400/230 Volts 5 kW & up to 500 kW	400.00	16.50	12.00
C -2(b)	For supply at 11,33 kV up to and including 5000 kW	380.00	16.50	11.50
C -3(b)	For supply at 132 kV up to and including 5000 kW	360.00	16.50	11.25

D - AGRICULTURE TARIFF

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
D-1	For all Loads	200.00		11.22
	Time of Use		Peak	Off-Peak
D-2	For all Loads	200.00	16.50	10.80

Note:- The consumers having sanctioned load less than 5 kW can opt for TOU metering.

E - TEMPORARY SUPPLY TARIFFS

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
E-1(i)	Residential Supply	-	14.00
E-1(ii)	Commercial Supply	-	15.00
E-2 (i)	Industrial Supply	-	15.05
E-2 (ii)	Bulk Supply		
	(a) at 400 Volts	-	15.00
	(b) at 11 kV		14.98

For the categories of E-1(i&ii) and E-2 (I&ii) above, the minimum bill of the consumers shall be Rs. 50/- per day subject to a minimum of Rs.500/- for the entire period of supply, even if no energy is consumed.

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F - SEASONAL INDUSTRIAL SUPPLY TARIFF

125% of relevant industrial tariff

Note:

Tariff-F consumers will have the option to convert to Regular Tariff and vice versa. This option can be exercised at the time of a new connection or at the beginning of the season. Once exercised , the option remains in force for at least one year.

G- PUBLIC LIGHTING

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
	Street Lighting	-	13.90

Under Tariff G, there shall be a minimum monthly charge of Rs.500/- per month per kW of lamp capacity installed.

H - RESIDENTIAL COLONIES ATTACHED TO INDUSTRIAL PREMISES

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh
	Residential Colonies attached to industrial premises	-	14.00

J - SPECIAL CONTRACTS UNDER NEPRA (SUPPLY OF POWER) REGULATIONS 2015

Sr. No.	TARIFF CATEGORY / PARTICULARS	FIXED CHARGES Rs/kW/M	VARIABLE CHARGES Rs/kWh	
J -1	For supply at 66 kV & above and having sanctioned load of 20MW & above	360.00		12.00
J-2				
(a)	For supply at 11,33 kV	380.00		12.50
(b)	For supply at 66 kV & above	360.00		12.00
J-3				
(a)	For supply at 11,33 kV	380.00		12.50
(b)	For supply at 66 kV & above	360.00		12.00
	Time Of Use		Peak	Off-Peak
J -1(b)	For supply at 66 kV & above and having sanctioned load of 20MW & above	360.00	16.50	11.25
J-2 (c)	For supply at 11,33 kV	380.00	16.50	11.50
J-2 (d)	For supply at 66 kV & above	360.00	16.50	11.25
J-3 (c)	For supply at 11,33 kV	380.00	16.50	11.50
J-3 (d)	For supply at 66 kV & above	360.00	16.50	11.25

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Annex-VI

TERMS AND CONDITIONS OF TARIFF
(FOR SUPPLY OF POWER SPECIFIC TO EACH CONSUMER CATEGORY)

PART-I

GENERAL DEFINITIONS

The Company, for the purposes of these terms and conditions means K-Electric engaged in the business of distribution of electricity within the territory mentioned in the licence granted to it for this purpose.

1. "Month or Billing Period", unless otherwise defined for any particular tariff category, means a billing month of 30 days or less reckoned from the date of last meter reading.
2. "Minimum Charge", means a charge to recover the costs for providing customer service to consumers even if no energy is consumed during the month.
3. "Fixed Charge" means the part of sale rate in a two-part tariff to be recovered on the basis of "Billing Demand" in kilowatt on monthly basis.
4. "Billing Demand" means the highest of maximum demand recorded in a month except in the case of agriculture tariff D2 where "Billing Demand" shall mean the sanctioned load.
5. "Variable Charge" means the sale rate per kilowatt-hour (kWh) as a single rate or part of a two-part tariff applicable to the actual kWh consumed by the consumer during a billing period.
6. "Maximum Demand" where applicable, means the maximum of the demand obtained in any month measured over successive periods each of 30 minutes' duration except in the case of consumption related to Arc Furnaces, where "Maximum Demand" shall mean the maximum of the demand obtained in any month measured over successive periods each of 15 minutes' duration.
7. "Sanctioned Load" where applicable means the load in kilowatt as applied for by the consumer and allowed/authorized by the Company for usage by the consumer.
8. "Power Factor" means the ratio of kWh to KVAh recorded during the month or the ratio of kWh to the square root of sum of square of kWh and kVARh,.
9. Point of supply means metering point where electricity is delivered to the consumer.
10. Peak and Off Peak hours for the application of Time Of Use (TOU) Tariff shall be the following time periods in a day:

	* PEAK TIMING	OFF-PEAK TIMING
April to October (inclusive)	6.30 PM to 10.30 PM	Remaining 20 hours of the day
November to March (inclusive)	6.00 PM to 10.00 PM	-do-

* To be duly adjusted in case of day light time saving

11. "Supply", means the supply for single-phase/three-phase appliances inclusive of both general and motive loads subject to the conditions that in case of connected or sanctioned load exceeding 4 kW supply shall be given at three-phase.
12. "Consumer" means a person of his successor-in-interest as defined under Section 2(iv) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).
13. "Charitable Institution" means an institution, which works for the general welfare of the public on no profit basis and is registered with the Federal or Provincial Government as such and has been issued tax exemption certificate by Federal Board of Revenue (FBR).

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14. NTDCL means the National Transmission and Dispatch Company Limited.
15. CPPA(G) means Central Power Purchasing Agency Guarantee Limited (CPPA)(G).
16. The "Authority" means "The National Electric Power Regulatory Authority (NEPRA)" constituted under the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

GENERAL CONDITIONS

1. "The Company shall render bills to the consumers on a monthly basis or less on the specific request of a consumer for payment by the due date.
2. The Company shall ensure that bills are delivered to consumers at least seven days before the due date. If any bill is not paid by the consumer in full within the due date, a Late Payment Charge of 10% (ten percent) shall be levied on the amount billed excluding Govt. tax and duties etc. In case bill is not served at least seven days before the due date then late payment surcharge will be levied after 7th day from the date of delivery of bill.
3. The supply provided to the consumers shall not be available for resale.
4. In the case of two-part tariff average Power Factor of a consumer at the point of supply shall not be less than 90%. In the event of the said Power factor falling below 90%, the consumer shall pay a penalty of two percent increase in the fixed charges determined with reference to maximum demand during the month corresponding to one percent decrease in the power factor below 90%.

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PART-II

(Definitions and Conditions for supply of power specific to each consumer category)

A-1 RESIDENTIAL

Definition

"Life Line Consumer" means those residential consumers having single phase electric connection with a sanctioned load up to 1 kW.

At any point of time, if the floating average of last six months' consumption exceed 50 units, then the said consumer would not be classified as life line for the billing month even if its consumption is less than 50 units. For the purpose of calculating floating average, the consumption charged as detection billing would also be included.

1. This Tariff is applicable for supply to;

   i) Residences,
   ii) Places of worship,

2. Consumers having sanctioned load less than 5 kW shall be billed on single-part kWh rate i.e. A-1(a) tariff.
3. All new consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangement and shall be billed on the basis of tariff A-l(b) as set out in the Schedule of Tariff.
4. All existing consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangement and converted to A- 1(b) Tariff by the Company.

A-2 COMMERCIAL

1. This tariff is applicable for supply to commercial offices and commercial establishments such as:

   i) Shops,
   ii) Hotels and Restaurants,
   iii) Petrol Pumps and Service Stations,
   iv) Compressed Natural Gas filling stations,
   v) Private Hospitals/Clinics/Dispensaries,
   vi) Places of Entertainment, Cinemas, Theaters, Clubs;
   vii) Guest Houses/Rest Houses,
   viii) Office of Lawyers, Solicitors, Law Associates and Consultants, All Private Offices etc.

2. Consumers under tariff A-2 having sanctioned load of less than 5 kW shall be billed under a Single-Part kWh rate A-2(a).
3. All existing consumers under tariff A-2 having sanctioned load 5 kW and above shall be billed on A-2(b) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff A-2(c).
4. All new connections having load requirement 5 kW and above shall be provided T.O.U meters and shall be billed under tariff A-2(c).

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A-3 GENERAL SERVICES

1. This tariff is applicable to;

i. Approved religious and charitable institutions
ii. Government and Semi-Government offices and Institutions
iii. Government Hospitals and dispensaries
iv. Educational institutions
v. Water Supply schemes including water pumps and tube wells operating on three phase 400 volts other than those meant for the irrigation or reclamation of Agriculture land.

1. Consumers under General Services (A-3) shall be billed on single-part kWh rate i.e. A-3(a) tariff.

B INDUSTRIAL SUPPLY

Definitions

1. "Industrial Supply" means the supply for bona fide industrial purposes in factories including the supply required for the offices and for normal working of the industry.
2. For the purposes of application of this tariff an "Industry" means a bona fide undertaking or establishment engaged in manufacturing, value addition and/or processing of goods.
3. This Tariff shall also be available for consumers having single-metering arrangement such as;

   i) Poultry Farms
   ii) Fish Hatcheries and Breeding Farms and
   iii) Software houses

Conditions

An industrial consumer shall have the option, to switch over to seasonal Tariff-F, provided his connection is seasonal in nature as defined under Tariff-F, and he undertakes to abide by the terms and conditions of Tariff-F and pays the difference of security deposit rates previously deposited and those applicable to Tariff-F at the time of acceptance of option for seasonal tariff. Seasonal tariff will be applicable from the date of commencement of the season, as specified by the customers at the time of submitting the option for Tariff-F. Tariff-F consumers will have the option to convert to corresponding Regular Industrial Tariff category and vice versa. This option can be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.

B-1 SUPPLY AT 400 VOLTS THREEPHASE AND/OR 230 VOLTS SINGLE PHASE

1. This tariff is applicable for supply to Industries having sanctioned load up-to 25 kW.
2. Consumers having sanctioned load up-to 25 kW shall be billed on single-part kWh rate.
3. All existing consumers under tariff B-1 shall be provided T.O.U metering arrangement by the Company and convert it to-B1 (b) Tariff.
4. All new applicants i.e. prospective consumers applying for service to the Company shall be provided T.O.U metering arrangement and charged according to the applicable T.O.U tariff.

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B-2 SUPPLY AT 400 VOLTS

1. This tariff is applicable for supply to Industries having sanctioned load of more than 25 kW up to and including 500 kW.
2. All existing consumers under tariff B-2 shall be provided T.O.U metering arrangement by the Company and converted to B-2(b) Tariff.
3. All existing consumers under tariff B-2 shall be billed on B-2(a) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff B-2(b).
4. All new applicants i.e. prospective consumers applying for service to the Company shall be provided T.O.U metering arrangement and charged according to the applicable T.O.U tariff.

B-3 SUPPLY AT 11 kV AND 33 kV

1. This tariff is applicable for supply to Industries having sanctioned load of more than 500 kW up to and including 5000 kW and also for Industries having sanctioned load of 500 kW or below who opt for receiving supply at 11 kV or 33 kV.
2. If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
3. The supply under this Tariff shall not be available to a prospective consumer unless he provides, to the satisfaction and approval of the Company, his own Transformer, Circuit Breakers and other necessary equipment as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the cost of service connection shall be regulated by the NEPRA eligibility criteria.
4. All existing consumers under tariff B-3 shall be provided T.O.U metering arrangement by the Company and converted to B-3(b) Tariff.
5. All existing consumers under tariff B-3 shall be billed on B-3(a) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff B-3(b).
6. All new applicants i.e. prospective consumers applying for service to the Company shall be provided T.O.U metering arrangement and charged according to the applicable T.O.U tariff.

B-4 SUPPLY AT 66 kV and 132 kV

1. This tariff is applicable for supply to Industries for all loads of more than 5000 kW receiving supply at 66 kV and 132 kV and also for Industries having load of 5000 kW or below who opt to receive supply at 66 kV or 132 kV.
2. If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
3. If the Grid Station required for provision of supply falls within the purview of the dedicated system under the NEPRA Eligibility Criteria, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively, pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the

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Company. The recovery of cost of service connection shall be regulated by NEPRA Eligibility Criteria.

4. All existing consumers under tariff B-4 shall be provided T.O.U metering arrangement by the Company and converted to B-4(b) Tariff.
5. All existing consumers under tariff B-4 shall be billed on B-4(a) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff B-4(b).
6. All new applicants i.e. prospective consumers applying for service to the Company shall be provided T.O.U metering arrangement and charged according to the applicable T.O.U tariff.

B-5 SUPPLY AT 220 kV AND ABOVE

1. This tariff is applicable for supply to Industries for all loads of more than 5000 kW receiving supply at 220 kV and above and also for Industries having load of 5000 kW or below who opt to receive supply at 220 kV.
2. If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.
3. If the Grid Station required for provision of supply falls within the purview of the dedicated system under the NEPRA Eligibility Criteria, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively, pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of cost of service connection shall be regulated by NEPRA Eligibility Criteria.
4. All the new industrial consumers shall be billed on the basis of ToU tariff B-5 given in the Schedule of Tariff.

C BULK SUPPLY

"Bulk Supply" for the purpose of this Tariff, means the supply given at one point for self-consumption not selling to any other consumer such as residential, commercial, tube-well and others.

General Conditions

If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days no notice will be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days the fixed charges shall be assessed on proportionate basis for actual number of days between the date of old reading and the new reading.

C-I SUPPLY AT 400/230 VOLTS

1. This Tariff is applicable to a consumer having a metering arrangement at 400/230 volts, having sanctioned load of up to and including 500 kW.
2. Consumers having sanctioned load less than 5 kW shall be billed on single-part kWh rate i.e. C-I(a) tariff'.
3. All new consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangement and shall be billed on the basis of Time-of-Use (T.O.U) tariff C-1(c) given in the Schedule of Tariff.
4. All the existing consumers governed by this tariff having sanctioned load 5 kW and above shall be provided T.O.U metering arrangements.

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5. All existing consumers under tariff C-1 having sanctioned load 5 kW and above shall be billed on C-1(b) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff C-1(c).

C-2 SUPPLY AT 11 kV AND 33 kV

1. This tariff is applicable to consumers receiving supply at 11 kV or 33 kV at one-point metering arrangement and having sanctioned load of up to and including 5000 kW.
2. The supply under this Tariff shall not be available to a prospective consumer unless he provides, to the satisfaction and approval of the Company, his own Transformer, Circuit Breakers and other necessary equipment as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively pays to the Company for all apparatus and equipment if so provided and installed by the Company. The recovery of the cost of service connection shall be regulated by the NEPRA eligibility criteria.
3. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff C-2(b) as set out in the Schedule of Tariff.
4. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to C-2(b)
5. All existing consumers under tariff C-2 shall be billed on C-2(a) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff C-2(b).

C-3 SUPPLY AT 66 kV, 132 kV AND ABOVE

1. This tariff is applicable to consumers having sanctioned load of more than 5000 kW receiving supply at 66 kV, 132kV and above.
2. If the Grid Station required for provision of supply falls within the purview of the dedicated system under the NEPRA Eligibility Criteria, the supply under this Tariff shall not be available to such a prospective consumer unless he provides, to the satisfaction and approval of the Company, an independent grid station of his own including Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus as part of the dedicated distribution system for receiving and controlling the supply, or, alternatively, pays to the Company for all such Land, Building, Transformers, Circuit Breakers and other necessary equipment and apparatus if so provided and installed by the Company. The recovery of cost of service connection shall be regulated by NEPRA Eligibility Criteria.
3. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to C-3(b).
4. All existing consumers under tariff C-3 shall be billed on C-3(a) tariff till such time that they are provided T.O.U metering arrangement; thereafter such consumers shall be billed on T.O.U tariff C-3(b).
5. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff C-3(b) as set out in the Schedule of Tariff.

D AGRICULTURAL SUPPLY

"Agricultural Supply" means the supply for Lift Irrigation Pumps and/or pumps installed on Tube-wells intended solely for irrigation or reclamation of agricultural land or forests, and include supply for lighting of the tube-well chamber.

Special Conditions of Supply

1. This tariff shall apply to:

   i) Bona fide forests, agriculture tube-well and lift irrigation pumps for irrigation of agricultural land.

   ii) Tube-Wells meant for aqua-culture, viz. fish farms, fish hatcheries and fish nurseries.

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iii) Tube-wells installed in a dairy farm meant for cultivating crops as fodder and for upkeep of cattle.

2. If, for any reason, the meter reading date of a consumer is altered and the acceleration/retardation in the date is up to 4 days, no notice shall be taken of this acceleration or retardation. But if the date is accelerated or retarded by more than 4 days, the fixed charges shall be assessed on proportionate basis for the actual number of days between the date of the old reading and the new reading.

3. The lamps and fans consumption in the residential quarters, if any, attached to the tube-wells shall be charged entirely under Tariff A-1 for which separate metering arrangements should be installed.

4. The supply under this Tariff shall not be available to consumer using pumps for the irrigation of parks, meadows, gardens, orchards, attached to and forming part of the residential, commercial or industrial premises in which case the corresponding Tariff A-1, A-2 or Industrial Tariff B-1, B-2 shall be respectively applicable.

D-1 For all loads

D-2 Time of Use for all loads

1. Consumers having sanctioned load less than 5 kW shall be billed on single-part kWh rate i.e. D-1 tariff given in the Schedule of Tariff.

2. All new consumers having sanctioned load 5 kW and above shall be provided TOU metering arrangement and shall be charged on the basis of Time-of- Use (T.O.U) tariff D- 2 given in the Schedule of Tariff.
3. All the existing consumers having sanctioned load 5 kW and above shall be provided T.O.U metering arrangements and shall be governed by D-1 till that time.

E -1 TEMPORARY RESIDENTIAL/COMMERCIAL SUPPLY

Temporary Residential/Commercial Supply means a supply given to persons temporarily on special occasions such as ceremonial, religious gatherings, festivals, fairs, marriages and other civil or military functions. This also includes supply to touring cinemas and persons engaged in construction works for all kinds of single phase loads. For connected load exceeding 4 kW, supply may be given at 400 volts (3 phase) to allow a balanced distribution of load on the 3 phases. Normally, temporary connections shall be allowed for a period of 3 months which can be extended on three months basis subject to clearance of outstanding dues.

Special Conditions of Supply

1. This tariff shall apply to Residential and Commercial consumers for temporary supply.
2. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.

E -2 TEMPORARY INDUSTRIAL SUPPLY

"Temporary Industrial Supply" means the supply given to an Industry for the bonafide purposes mentioned under the respective definitions of "Industrial Supply", during the construction phase prior to the commercial operation of the Industrial concern.

SPECIAL CONDITIONS OF SUPPLY

1. Ordinarily the supply under this Tariff shall not be given by the Company without first obtaining security equal to the anticipated supply charges and other miscellaneous charges for the period of temporary supply.

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2. Normally, temporary connections shall be allowed for a period of 3 months, which may be extended on three months' basis subject to clearance of outstanding dues.

F SEASONAL INDUSTRIAL SUPPLY

"Seasonal Industry" for the purpose of application of this Tariff, means an industry which works only for part of the year to meet demand for goods or services arising during a particular season of the year. However, any seasonal industry running in combination with one or more seasonal industries, against one connection, in a manner that the former works in one season while the latter works in the other season (thus running throughout the year) will not be classified as a seasonal industry for the purpose of the application of this Tariff.

Definitions

1. "Year" means any period comprising twelve consecutive months.
2. All "Definitions" and "Special Conditions of Supply" as laid down under the corresponding Industrial Tariffs shall also form part of this Tariff so far as they may be relevant.

Special Conditions of Supply

1. This tariff is applicable to seasonal industry.
2. Fixed Charges per kilowatt per month under this tariff shall be levied at the rate of 125% of the corresponding regular Industrial Supply Tariff Rates and shall be recovered only for the period that the seasonal industry actually runs subject to minimum period of six consecutive months during any twelve consecutive months. The condition for recovery of Fixed Charges for a minimum period of six months shall not, however, apply to the seasonal industries, which are connected to the Company's Supply System for the first time during the course of a season.
3. The consumers falling within the purview of this Tariff shall have the option to change over to the corresponding industrial Supply Tariff, provided they undertake to abide by all the conditions and restrictions, which may, from time to time, be prescribed as an integral part of those Tariffs. The consumers under this Tariff will have the option to convert to Regular Tariff and vice versa. This option can be exercised at the time of obtaining a new connection or at the beginning of the season. Once exercised, the option will remain in force for at least one year.

4. All seasonal loads shall be disconnected from the Company's Supply System at the end of the season, specified by the consumer at the time of getting connection, for which the supply is given. In case, however, a consumer requires running the non-seasonal part of his load (e.g., lights, fans, tube-wells, etc.) throughout the year, he shall have to bring out separate circuits for such load so as to enable installation of separate meters for each type of load and charging the same at the relevant Tariff.

5. Where a "Seasonal Supply" consumer does not come forward to have his seasonal industry re-connected with the Company's Supply System in any ensuing season, the service line and equipment belonging to the Company and installed at his premises shall be removed after expiry of 60 days of the date of commencement of season previously specified by the consumer at the time of his obtaining new connection/re-connection. However, at least ten clear days notice in writing under registered post shall be necessary to be given to the consumer before removal of service line and equipment from his premises as aforesaid, to enable him to decide about the retention of connection or otherwise. No Supply Charges shall be recovered from a disconnected seasonal consumer for any season during which he does not come forward to have his seasonal industry re-connected with the Company's Supply System.

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G PUBLIC LIGHTING SUPPLY

"Public Lighting Supply" means the supply for the purpose of illuminating public lamps.

Definitions

"Month" means a calendar month or a part thereof in excess of 15 days.

Special Conditions of Supply

The supply under this Tariff shall be used exclusively for public lighting installed on roads or premises used by General Public.

H RESIDENTIAL COLONIES ATTACHED TO INDUSTRIES

This tariff is applicable for one-point supply to residential colonies attached to the industrial supply consumers having their own distribution facilities.

Definitions

"One Point Supply" for the purpose of this Tariff, means the supply given by one point to Industrial Supply Consumers for general and domestic consumption in the residential colonies attached to their factory premises for a load of 5 Kilowatts and above. The purpose is further distribution to various persons residing in the attached residential colonies and also for perimeter lighting in the attached residential colonies.

"General and Domestic Consumption", for the purpose of this Tariff, means consumption for lamps, fans, domestic applications, including heated, cookers, radiators, air-conditioners, refrigerators and domestic tube-wells.

"Residential Colony" attached to the Industrial Supply Consumer, means a group of houses annexed with the factory premises constructed solely for residential purpose of the bonafide employees of the factory, the establishment or the factory owners or partners, etc.

Special Conditions of Supply

The supply under this Tariff shall not be available to persons who meet a part of their requirements from a separate source of supply at their premises.

J. SPECIAL CONTRACTS UNDER NEPRA (SUPPLY OF POWER) REGULATIONS 2015

Supply for the purpose of this tariff means the supply given at one or more common delivery points;

i. To a licensee procuring power from K-Electric for the purpose of further supply within its respective service territory and jurisdiction.

ii. To an O&M operator under the O&M Agreement within the meaning of NEPRA (Supply of Power) Regulations 2015 duly approved by the Authority for the purpose of further supply within the service territory and jurisdiction of the K-Electric

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iii. To an Authorized agent within the meaning of NEPRA (Supply of Power) Regulations 2015, procuring power from the K-Electric for further supply within the service territory and jurisdiction of the K-Electric

J-1 SUPPLY TO LICENSEE

1. This tariff is applicable to a Licensee having sanctioned load of 20 MW and above receiving supply at 66 kV and above.

2. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to J-1(b).

3. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff J-1(b) as set out in the Schedule of Tariff.

SUPPLY UNDER O&M AGREEMENT

J-2 (a) SUPPLY AT 11 KV AND 33 KV

1. This tariff is applicable to an O&M operator receiving supply at 11 kV or 33 kV under the O&M Agreement duly approved by the Authority.

2. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to J-2(c).

3. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff J-2(c) as set out in the Schedule of Tariff.

J-2 (b) SUPPLY AT 66 KV AND ABOVE

1. This tariff is applicable to an O&M operator receiving supply at 66 kV & above under the O&M Agreement duly approved by the Authority.

2. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to J-2(d).

3. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff J-2(d) as set out in the Schedule of Tariff.

SUPPLY TO AUTHORIZED AGENT

J-3 (a) SUPPLY AT 11 KV AND 33 KV

1. This tariff is applicable to an authorized agent receiving supply at 11 kV or 33 kV.

2. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to J-3(c).

3. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff J-3(c) as set out in the Schedule of Tariff.

J-3 (b) SUPPLY AT 66 KV AND ABOVE

1. This tariff is applicable to an authorized agent receiving supply at 66 kV & above.

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2. Existing consumers governed by this tariff shall be provided with T.O.U metering arrangement and converted to J-3(d).

3. All new consumers shall be provided TOU metering arrangement and shall be billed on the basis of tariff J-3(d) as set out in the Schedule of Tariff.

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Annex – VII

CLAWBACK MECHANISM FOR PROFIT SHARING WITH THE CONSUMERS

1- K-Electric Limited shall, on yearly basis and within the first week of January, submit the proposed adjustment of tariff arising out of the transfer of a portion of the profits of the preceding financial year to consumers according to the Claw-Back formula as provided hereunder along with the basis of the calculations supported with the relevant audited financial statements:

CLAWBACK FORMULA

2- To the extent that the Annual Return on the Average Regulatory Asset Base (hereinafter referred to as "Average RAB") exceeds the limits prescribed hereunder the surplus return shall be shared with consumers through a reduction in tariff, in annual sharing proportions as set out below:

	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
25% to be shared with consumers	23.40% - 26.40%	18.95% - 21.95%	13.31% - 16.31%	11.17% - 14.17%	11.04% - 14.04%	11.04% - 14.04%	11.54% - 14.54%
50% to be shared with consumers	26.41% - 29.40%	21.96% - 24.95%	16.32% - 19.31%	14.18% - 17.17%	14.05% - 17.04%	14.05% - 17.04%	14.55% - 17.54%
75% to be shared with consumers	Above 29.41%	Above 24.96%	Above 19.32%	Above 17.18%	Above 17.05%	Above 17.05%	Above 17.55%

3- The Annual Return on the RAB shall be respective year's Earnings Before Interest and Tax (hereinafter referred to as "EBIT") divided by the Average RAB. Method for calculation of both EBIT and Average RAB are mentioned is hereunder;

4- EBIT shall be worked out according to formula mentioned hereunder;

	Earning Before Interest and Tax as per the financial Statement
Add	Provision for Doubtful debt
Add	Any other provision/expenses charged by the Petitioner that the Authority considers unjustified
Add	Depreciation charged to P&L with revaluation
Less	Write-offs amount allowed by the Authority for respective year
Less	Depreciation for the year on Cost Basis
Less	Late Payment Surcharge (LPS)
Less	Any Cost Allowed as Pass-Through by the Authority (e.g. Corporate Tax Paid, WWF, WPPF, etc.)
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5- <u>Average RAB</u>

Average RAB shall be worked out according to the following formula;

	Fixed Assets Without Revaluation(O/B)
Add	Additions during the Year
Less	Accumulated Depreciation on cost
=	**Net Fixed Assets**
Add	WIP on Cost (C/B)
Less	Deffered Revenue (Consumer financed Asset)
=	**Regulatory Asset Base (RAB)**
Average RAB =	((Current RAB + Last Year RAB) / 2)

The decrease in average sale rate (S_{ICB}) will be calculated as under.-

$$(S_{ICB}) = \frac{P_S}{U_{ST}}$$

Where P_S = The aggregate profit to be transferred to the consumers calculated in according with the methodology as discussed earlier.

U_{ST} = Estimated units expected to be sold during the twelve months following the date of decision of the Authority.

6- The above reduction shall be applied uniformly to all classes of consumer categories (excluding Life Line Consumers) directly in their monthly bills vide Authority's separate decision in this regard.

7- The Authority shall make its determination, after the completion of the procedural requirements, as soon as possible but not later than Forty five (45) days of the receipt of the request for reduction in rates and shall notify the same in the official gazette.

8- In case, K-Electric does not submit a request for tariff adjustment in a certain year, the Authority shall review the audited financial statements on its own and approve a tariff reduction, based on the aforementioned formulae, required to be passed on to the consumers, based on the respective proportion of profits.

9- The decrease in consumer class-wise tariff shall be allowed in terms of paisas per kWh rounded to two decimal places.

10- K-Electric shall not carry out any adjustment in the consumer end tariff unless allowed, approved or directed by the Authority.

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