National Electric Power Regulatory Authority

Islamic Republic of Pakistan

Registrar

NEPRA Tower, Ataturk Avenue(East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/TRF-287/NTDC-2014/6291-6293
April 23, 2015

Subject: **Determination of the Authority in the matter of Petition filed by National Transmission & Despatch Company Ltd. (NTDC) for Determination of Its Transfer/Wheeling Charges for the FY 2014-15 -** Case No. NEPRA/TRF-287/NTDC-2014

Dear Sir,

Please find enclosed herewith the subject Determination of the Authority along with Annex-1, II & III (46 pages) in Case No. NEPRA/TRF-287/NTDC-2014.

2. The determination is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997) and Rule 16(11) of the National Electric Power Regulatory Authority Tariff (Standards and Procedure) Rules, 1998.

Enclosure: As above

23.04.15

(Syed Safeer Hussain)

Secretary
Ministry of Water & Power
'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)

PETITION NO. NEPRA/TRF-277/NTDC-2014

DETERMINAITON OF TRANSFER/WHEELING CHARGES

FOR THE YEAR 2014-15

UNDER

NEPRA TARIFF STANDARDS & PROCEDURE RULES - 1998
FOR
NATIONAL TRANSMISSION & DESPATCH COMPANY (NTDC)

Islamabad

April 23 , 2015

DETERMINATION OF THE AUTHORITY IN THE MATTER OF PETITION FILED BY NATIONAL TRANSMISSION & DESPATCH COMPANY (NTDC) FOR DETERMINATION OF TRANSFER / WHEELING CHARGES FOR THE FY 2014-15.
CASE NO. NEPRA/TRF/277/NTDC-2014

PETITIONER

National Transmission & Dispatch Company Limited (NTDC)
540 WAPDA House, Lahore.

INTERVENER

1. Anwar Kamal Law Associates,
   1-Turner Road, Lahore.

COMMENTATOR

1. Multan Chamber of Commerce & Industry,
   Shahra-e-Aiwan-e-Tijarat O Sanat,
   Multan.

REPRESENTATION

- Managing Director
- General Manager GSO
- General Manager Planning (P)
- General Manager (SO), NPCC
- Finance Director

ABBREVIATIONS

CPPA	Central Power Purchasing Agency
FY	Financial Year
GOP	Government of Pakistan
MoWP	Ministry of Water and Power
NTDC	National Transmission & Despatch Company Limited
GWh	Giga Watt Hours
KV	Kilo Volt
Kw	Kilo Watt
kWh	Kilo Watt Hour
MW	Mega Watt
NEPRA	National Electric Power Regulatory Authority
O&M	Operation and Maintenance
PEPCO	Pakistan Electric Power Company
SRO	Statutory Regulatory Order
T&T	Transmission and Transformation Losses

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 determination.

15 4 xv

(Khawaja Muhammad Naeem)
Member

20.4.15

(Himayat Ullah Khan)
Member

21/4/15

Maj. Rtd. Haroon Rashid
Vice Chairman

20/4/15

Brig. (R) Tariq Saddozai
Chairman

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23.04.15

1. Background of the NTDC

1.1 National Transmission & Dispatch Company (NTDC), hereinafter referred as (the petitioner) is one of the successor companies of WAPDA, which was incorporated on November 06, 1998 and commenced commercial operation on March 1, 1999. The company has a status of public (unquoted) limited liability company under the Companies Ordinance 1984. NTDC was granted Transmission License No. TL/01/2002 on 31st December, 2002 to engage in the exclusive transmission business for a term of thirty (30) years, pursuant to Section 17 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997. Under the regime set out in the License, the Company is entrusted to act as System Operator (SO), Transmission Network Operator (TNO), Central Power Purchasing Agency (CPPA) and Contract Registrar and Power Exchange Administrator (CRPEA). Presently, the Petitioner operates and maintains the following Network System;

NTDC Network	500 kV	220 kV	Total
Number of Grid Stations	13	35	48
Transmission Link (kms)	5,183	9,104	14,287
Transformers Capacity(MVA)	17,400	21,030	38,430

2 NTDC Past Determination History

2.1 NTDC filed first petition for determination of transfer / wheeling charges on 28.4.2003 and its determination was given 13.4.2004. NTDC filed 2nd petition for transfer / wheeling charges on 24.5.2005 and its determination was issued on 6.1.2006. In year 2006 NTDC's transfer price mechanism was revised to include K-ELECTRIC as a Distribution Company in addition to eight Ex-WAPDA Distribution Companies while maintaining the wheeling Use of System Charges for NTDC. NTDC filed 3rd petition on 23.8.2010 and its determination was made on 9.5.2011. NTDC submitted motion for leave for review with respect to the determination of the Authority which was decided on 18.7.2011. The comparison of actual and determined tariff is given hereunder:

Rs./kW/Month	FY 2003-04	FY 2006-07	FY 2010-11	FY 2012-13
Fixed Charge (UOSCF)	73.40	100.15	85.91	102.43

3 NTDC Current Petition

3.1 National Transmission and Dispatch Company Limited (NTDCL), hereinafter called "the Petitioner", being a Transmission Licensee of NEPRA filed a petition for the determination of transfer/wheeling charges pertaining to the FY 2014-15 in terms of Rule 3(1) of Tariff Standards & Procedure Rules-1998 ("Rules") vide letter no. MD/NTDCL/FD/1681-85 dated 17th September, 2014. According to NTDC following are the main reasons / grounds to make afresh tariff application for the year 2014-15:

- Increase in General Establishment Expenditure due to an Adhoc and other reliefs announced by GoP in the annual Budget.

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- The induction of new employees against vacant posts due to retirement and induction against system expansion in the Transmission Network of NTDC.
- Increase in Maintenance Expenditure:
    - To ensure the desired reliability, security and adequacy of the transmission network,
    - To maintain and strengthen the transmission system to the optimum level,
    - For augmentation/ Expansion in the Transmission Network of NTDC,
- Financial burden of T & T losses due to determination of benchmark of 2.5% - 3.0% approved by the NEPRA Authority which is swallowing return on average Rs. 3.3 billion per year.
- NTDCL being the infrastructure based company needs borrowing for expansion program which results in increase in financial charges.
- To seek minimal of 13.11% return on equity as allowed by the Authority in its last tariff determination of NTDCL.

NTDC sought the following relief:-

- Use of System Charge (UoSC) to recover the total costs of NTDC and return on equity. As the revenues of NTDC are to be accrued from Use of System Charge, therefore, NTDC requests NEPRA for increase in the Rate of Use of System Charge. Revenues and profit positions for the actual and projected period for the year 2011-12 to FY 2014-15 are also depicted in the following table.

Sr/ No	Description	2011-12 Actual	2012-13 Actual	2013-14 (Provisional)	2014-15 Estimated
1	Average monthly Demand (MW)	16,736	16,279	16,880	17,594
2	Demand Growth over last year		-2.73%	3.69%	4.23%
3	Use of System Charge (Rs/kW/Month)	100.15	85.91	85.91 102.43	173.67
4	Expected Revenues (Mln. Rs.)	18017	16782	19,836	36,668

3.2 **Proceedings**

3.2.1 In terms of rule 4 of NEPRA Tariff (Standards & Procedure) Rules, 1998 (hereinafter referred as the Rules", the petition was admitted by the Authority on15.10.2014 and in terms of sub-rules (5) & (6) of rle 4 and rule 5 of the Rules, notice of admission containing salient features of the petition was published in the national newspapers. on November 1, 2014. Individual letters were also communicated to the stakeholders. The petition was uploaded on NEPRA website i.e. www.nepra.org.pk for comments / input of the stakeholders.

3.2.2 In response to the notice an intervention request was received from Anwar Kamal Law Associates and Multan Chambers of Commerce & Industry participated as commentator.

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The same were allowed by the Authority during the hearing dated 14.11.2014. The stance taken by the intervener and commentator is given hereunder:-

4 **Mr. Anwar Kamal - Intervener**

4.1 The intervener has raised following questions:-

- In view of Article 7 of the NTDC's license, what is the model and what is the function of CPPA? Having passed more than two years since 2012, What is the current legal status?

- Does the NTDC license / model envisage just transmission lines or more? If more, then where are the necessary Rules etc. governing the matter?

- NTDC has taken a syndicated loan of Rs. 22 billion to facilitate GENCOs to enter into PPA with RPPs. What is the status of this loan and has NTDC repaid this entire loan after the RPPs are reported to have settled the matter, repaid the loan through the National Accountability Bureau (NAB) in consequence of the Supreme Court of Pakistan judgment in the matter?

- Have NTDC's receivables of Rs. 31 billion from K-ELECTRIC till 2008 been settled? If so, what is the settlement?

- In 2008 the marginal rate being charged by CPPA to K-ELECTRICO was changed to the Ex-WAPDA DISCOs rate. What was the effect of this on the consumer of Ex-WAPDA DISCOs?

5 **Multan Chamber of Commerce & Industry - Commentator.**

5.1 The president of the MCCI during hearing appreciated the presentation of the petitioner and stated that tariff may not be increased considering the current industrial troubles.

5.2 It was also decided by the Authority to conduct a hearing to arrive at a just and informed decision. The date of hearing was fixed as 14.11.2014 to be conducted in Avari Hotel Lahore. The venue, time and date of hearing was also notified to all concerned.

5.3 On the basis of pleadings, the following issues were framed to be considered during the hearing and for presenting oral and documentary evidence:-

i) Whether the following Authority's directions given in the tariff determination for FY 2012-13 are complied with?
  - to carry out independent study with respect to T&T losses.
  - to indicate the cost & benefit analysis of the new recruitment.
  - to indicate the cost benefit analysis of new investment program.
  - to develop the mechanism in consultation with the K-ELECTRIC for supply of electricity and submit for Authority's consideration.

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- to interconnect all upcoming renewable energy power projects before achieving their COD on priority basis from investment allowed.
- to obtain NOC from the petitioner in four weeks time and after issuance of NOC the interconnectivity will be the responsibility of the petitioner.
- to finalize the Energy Purchase Agreements with the renewal energy projects.
- to provide detailed analysis/impact of the 132 KV system to NEPRA with the proposal that whether the petitioner will take over this system or cost has to be accounted for in DISCOs accounts.
- To provide details with respect to transmission and transformation agreements with DISCOs/BPC.
- Develop a strategy/plan to recover its receivables and settle payables and updating Authority periodically.
- Grid stations book values to be worked on accurately for claiming expenditures thereon.

ii) Whether the Petitioner's projected General Establishment & Administration (GE&A) Costs for Rs. 6,426 million for FY 2014-15 based on provisional figure of Rs. 5,459 million in FY 2013-14 showing an increase of 18% is justified?.

iii) Whether the projected increase in Repair & Maintenance expenditures for Rs. 845 million for FY 2014-15 based on provisional figure for Rs.607 million in FY 2013-14 showing increase of 39% is justified?

iv) Whether the petitioner's projected insurance of Rs. 132 million for FY 2014-15 against the provisional amount of Rs. 119 for FY 2013-14 showing an increase of 11% is justified?

v) Whether the petitioner's projected depreciation of Rs. 4,327 million for FY 2014-15 against the provisional amount of Rs. 4,113 for FY 2013-14 is justified?

vi) Whether the projected increase in financial charges for Rs.2,576 million for FY 2014-15 based on provisional financial charges for Rs. 1,782 million in FY 2013-14 is justified?

vii) Whether the Petitioner's projected Return on Equity for FY 2014-15 for Rs. 16,218 million is justified?

viii) Whether the Petitioner's Prior Year Adjustments (PYA) for Rs. 3,610 million for FY 2012-13 & for Rs. 3,855 million for FY 2013-14 respectively are justified?

ix) Whether the Petitioner's projected Other Income of Rs. 1,320 million for the FY 2014-15 against provisional amount of Rs. 1,121 million is reasonable?

x) Whether the proposed Average Monthly MDI MW/Month 17,594 MW by the petitioner is justified for FY 2014-15.

xi) Whether the Petitioner's proposed Investment program of Rs 32,625 million for the FY 2014-15 is justified?

xii) Whether the petitioner's request for adjustment of T&T losses with an impact of Rs.2,332.39 million for FY 2012-13 is justified?

xiii) Whether the petitioner's request for adjustment of T&T losses from FY 2009-14 with an impact of Rs. 14,671 million is justified?

xiv) Whether the Annual Development Program for Rs. 811 million for FY 2014-15 is justified with its cost/benefits?

xv) Whether the detail of investment program of ongoing and new project and cost incurred on these projects claimed by the petitioner is justified? Whether the

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detailed studies have been carried out to indentify new projects? Whether an (n-1) criterion has been assured?

xvi) What steps have been taken for undertaking Extra High Voltage (above 500kV AC) or HVDC system induction in the existing network?

xvii) What steps have been taken for preventing the transmission system breakdowns resulting in blackouts and tripping during the foggy weather?

xviii) Whether the qualifications of external auditor in financial statements of FY 2012-13 are justified?

xix) Whether the concerns of the intervener and commentator are justified?

6. Hearing

6.1 Hearing in the matter was held on 14.11.2014 at Avari Hotel Lahore which was attended by the Petitioner, intervener, commentator and other stakeholders i.e. media, general public etc.

6.2 On the basis of the pleadings, record/evidence produced during the course of hearing and after hearing the parties, the issue-wise findings of the Authority is given hereunder:

7. Issue# 1Whether the Authority's directions given in the tariff determination for FY 2012-13 are complied with?

7.1 The NTDC was directed to submit the details with respect to the compliance of the following Authority's directions:

- The Petitioner to carry out independent study with respect to T&T losses.
- The Petitioner to indicate the cost & benefit analysis of the new recruitment.
- The Petitioner to indicate the cost benefit analysis of new investment program.
- The Petitioner to develop the mechanism in consultation with the K-ELECTRIC for supply of electricity and submit for Authority's consideration.
- The Petitioner is required to interconnect all upcoming renewable energy power projects before achieving their COD on priority basis from investment allowed.
- The renewable projects are required to obtain NOC from the petitioner in four weeks time and after issuance of NOC the interconnectivity will be the responsibility of the petitioner.
- The Petitioner is required to finalize the Energy Purchase Agreements with the renewal energy projects.
- To provide detailed analysis/impact of the 132 KV system to NEPRA with the proposal that whether the petitioner will take over this system or cost has to be accounted for in DISCOs accounts.
- Provide details with respect to transmission and transformation agreements with DISCOs/BPC.
- Develop a strategy/plan to recover its receivables and settle payables and updating Authority periodically.
- Grid stations book values to be worked on accurately for claiming expenditures thereon.

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8. **Direction # 1 The Petitioner to carry out independent study with respect to T&T losses.**

8.1 NTDC submitted that in order to comply with the direction of the Authority, NTDC has hired Power Planners International through ICB for evaluation of T&T losses of NTDCL system for FY 2011-12 & 2012-13 thereafter contract was signed on 25-3-2014.

8.2 The Authority during the last determination allowed T&T losses maximum to the extent of 3%. The Petitioner vide its letter No. GM/PP/CEMP/TRP-226/5087-89 dated November 24, 2014 submitted report on T&T losses to the Authority. The Petitioner has complied with the direction of the Authority in this regard.

9. **Direction # 2 The Petitioner to indicate the cost & benefit analysis of the new recruitment.**

9.1 NTDC submitted that the Company could not make general recruitments in FY 2012-13 & FY 2013-14 against vacant positions due to the ban imposed by GoP. Officers/ officials were recruited under Aghaz-E-Balochistan Package as detailed hereunder:

BPS	No. of Employees
BPS-17 & above	10
BPS 1-16	176
Total	**186**

9.2 Analysis and decision in this regard has been discussed under the issue of General Establishment & Administrative costs at Para 19 below.

10. **Direction # 3 The Petitioner to indicate the cost benefit analysis of new investment program.**

10.1 The Petitioner submitted the following cost benefit analysis of new investment program:

- Future planning and forecast of requirement of electricity in the country.
- Proper operation, maintenance and reliability of 500 kV and 220 kV Transmission Lines and Grid Stations.
- Proper monitoring and implementation of construction projects
- Effective monitoring of billing / recovery from IPP's etc.
- To keep the system operative and remove faults with the help of system protection and Technical Services Group (TS
- To facilitate new IPP's for construction of new projects in conventional , solar, and wind
- To accomplish assignments of design both in transmission lines and Grids
- To continue watch improvement in the design of transformers and meter etc through Design and Standards
- Replacement of retired employees.

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10.2 Analysis and decision with respect to the investment details has been discussed under the issue of investment program at Para# 28.

11. **Direction # 4 The Petitioner to develop the mechanism in consultation with the K-Electric for supply of electricity and submit for Authority's consideration.**

11.1 In response to the direction, the Petitioner stated that K- Electric as per clause 2.1 (a) of Power Purchase agreement (PPA) between the Petitioner & K- Electric is under obligation to request to the Petitioner to provide Electric Power reasonably required up to 650 MW. Further K- Electric, as per Power Dispatch Methodology is to inform National Power Control Center (NPCC) by means of written Dispatch instruction for a day on hourly basis about its reasonable power requirement . NPCC continuously has been asking K- Electric to provide its generation data to establish reasonability for supply of power.

11.2 The Petitioner informed that it held a meeting with K- Electric on the subject matter and K- Electric has never complied with NPCC's written requests regarding Power withdrawal. K- Electric instead to discuss the issue and comply with NPCC's requests argued that matter of power withdrawals by K- Electric is under litigation before the Honorable High court of Sindh and Court has extended interim status quo. Further K-Electric refused to discuss the matter till decision of the suit. PPA has already expired on 25th January, 2015.

11.3 No information is provided with respect to the updated agreement with K-Electric. According to the NTDC the matter is sub-judice. Considering the reason given by the Petitioner for non-compliance, the Authority directs the petitioner to pursue its compliance in co-ordination with Ministry of Water & Power.

12. **Direction # 5 The Petitioner is required to interconnect all upcoming renewable energy power projects before achieving their COD on priority basis from investment allowed.**

12.1 In response to the direction of the Authority the Petitioner stated that it has already provided the interconnection facility to the investors in the renewable sector before the commercial operation date (COD). Further the following three Plants have not achieved COD and CPPA/NTDCL has provided them the interconnection facility

- 49.5MW Three Gorges First Wind Farm
- 50 MW Foundation wind limited –I
- 50 MW Foundation wind limited –II

12.2 NTDC is directed that the renewable energy shall be evacuated on priority basis which is in line with the Power Policy 2006 & 2013 from the renewable power projects which are achieving COD in coming months.

13. **Direction # 6 The renewable projects are required to obtain NOC from the petitioner in four weeks time and after issuance of NOC the interconnectivity will be responsibility of the petitioner**

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13.1 The Petitioner did not reply to this direction of the Authority. The Petitioner is therefore directed to submit the status in this regard within one month of issuance of this determination.

14. <u>Direction # 7 The Petitioner is required to finalize the Energy Purchase Agreements with the renewal energy projects.</u>

14.1 The Petitioner submitted that it has signed EPAs with the following wind energy IPPs.

Fauji Fertilizer Company Energy Ltd.	April 5, 2011
Zorlu Energy Pakistan Ltd.	Jan 12, 2012
M/s Foundation Wind Energy-I Ltd.(FWEL-I)	Dec 20, 2012
M/s Foundation Wind Energy-II Ltd. (FWEL-II)	Dec 20, 2012
Three Gorges First Wind Farm Pak (Pvt) Ltd	Jan 4, 2013
Sapphire Wind Power Company (Pvt) Ltd.	Feb 20, 2014
Metro Power Company (Pvt) Ltd.,	Feb 26, 2014
Sachal Energy Development (Pvt) Ltd.,	Feb 27, 2014
Younas Energy Ltd.,	Mar 26, 2014
Hydro China Dawood Power Ltd.	Sep 5, 2014

14.2 Further the Petitioner has signed EPAs with following Bagasse/Biomass Co-generation Power Projects.

M/s JDW Unit - II Rahim Yar Khan	Mar 20, 2014
M/s JDW Unit - III Ghotki Sindh	Mar 20, 2014
M/s Chiniot Power Ltd., Chiniot	Jul 22, 2014
M/s RYK Mills Ltd., Rahim Yar Khan	Oct 10, 2014

14.3 EPAs under negotiations with various Wind Power Plants (WPPs) are as under:-

1. Tenaga Generasi Ltd.,
2. Master Wind Energy Ltd.
3. Zephyr Power Ltd.,
4. Gul Ahmed Energy Ltd.,
5. Wind Eagle Ltd (Technology Plc Ltd.)
6. HAWA Holding Ltd.,
7. United Energy Pakistan Ltd.,
8. United Energy Pakistan Ltd.,
9. Jhimpir Wind Power Ltd.,
10. Tapal Wind.,
11. NBT Wind Power Pakistan (Pvt) Ltd.,

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14.4 EPA's under negotiation with various Bagasse/Biomass Co-generation Power Projects are as under:
1. SSJD Bioenergy Ltd.,
2. Hamza Sugar Mills Ltd.

14.5 Most of the solar power plants are also in the process of finalization. NTDC is directed to provide the detailed power evacuation plan for the upcoming renewable power projects within one month of issuance of this determination.

15. <u>Direction # 8 To provide detailed analysis/impact of the 132 KV system to NEPRA with the proposal that whether the petitioner will take over this system or cost has to be accounted for in DISCOs accounts.</u>

15.1 In response to the above direction, the Petitioner stated that it is not advisable to take over the DISCOs 132/66 kV Grid Station at this stage after lapse of 16 years due to following facts.

- If the existing 132 kV system is merged again in NTDC, the responsibility of operation & Maintenance staff will increase because the equipment e.g Isolators, Transformer etc. are huge in number & deteriorated and mostly 132 kV breakers have been by passed at grid stations due to defect in breakers.

- A major bottleneck of taking over 132 kV system would be the transfer of assets from DISCOs to NTDCL.

- In case 132 kV network are given back of NTDC, what will be administration setup of new structure What will be the fate of SMS project and CDPs which are installed at 132 kV side of transformers feeding concerned DISCOs and accountability of sold units lines on DISCOs.

- How the lines losses will be calculated for NTDC.

15.2 The Authority considers that this issue needs to be discussed and addressed separately after consultation / input of the stakeholders. In view thereof a separate proceedings be initiated separately for resolving the subject issue.

16. <u>Direction # 9 Provide details with respect to transmission and transformation agreements with DISCOs/BPC.</u>

16.1 The Petitioner stated that Energy sale agreement (ESA) with DISCO's are valid till the year 2023 for which copies of the agreements have already been provided to the Authority. Further the Power purchase agreement (PPA) with K-Electric is valid till January 25, 2015. Transmission Charges are charged as per NEPRA provided mechanism given in the Petitioner's tariff.

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16.2 NTDC has complied with the Authority's directions. However, the Petitioner is directed to provide the copy of the agreement when it is finalized with K-Electric.

17 **Direction # 10 Develop a strategy/plan to recover its receivables and settle payables and updating Authority periodically.**

17.1 The Petitioner submitted that the collection of funds from DISCOs is mainly monitored by PEPCO. CPPA is regularly monitoring its receivables from DISCOs however the receivables are mainly dependent on the consumer-end tariff and payments of the Tariff Differential Subsidy (TDS) by the GoP. The Petitioner presented the following table for its receivables.

Rs. in Million

FY 2011-12	FY 2012-13	FY 2013-14
704,668	257,969	298,538

17.2 The Petitioner submitted the draft audited accounts according to which the receivables status is different. The draft audited accounts are as under:

Rs. in Million

Distribution Company	2014	2013
PESCO	119,895	51,918
K-Electric	35,174	32,182
FESCO	4,208	7,356
MEPCO	12,935	19,603
QESCO	81,730	27,571
GEPCO	1,006	10,503
IESCO	35	12,163
HESCO	48,464	26,528
LESCO	543	22,562
SEPCO	45,597	18,071
Un-billed cost of electrcity	7,631	6,424
Total	**357,219**	**234,882**

17.3 The receivables situation demand urgent steps to be taken by NTDC since non-recovery of the dues ultimately affect the routine maintenance of the NTDC system as well as construction of the transmission lines for upcoming power projects. It has been observed that the transmission system is not feasible to evacuate the electricity from the different power projects. In the recent cases the evacuation from Uch-II, Engro etc is the example of the poor transmission lines which are unable to evacuate the electricity . The demand supply gap is increasing and if the necessary steps in this regard have not been taken and rehabilitation of the transmission lines have not been made the whole transmission system across the country would be badly affected. Furthermore, the investment of new power projects would also be affected and the end-consumer would be burdened due to the Capacity Charge payments without getting single unit from these projects. The non-payments also enhance the circular debt in the country. In view thereof NTDC is directed

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to take necessary measures for improving recovery situation and take up this issue with the GOP in order to resolve the matter.

18 **<u>Direction # 11 Grid stations book values to be worked on accurately for claiming expenditures thereon.</u>**

18.1 The Petitioner submitted that it has worked out the book values of all grid stations of 500Kv and 220 KV as on 30-6-2013. The following table provides the cost and accumulated depreciation to work out the book value thereof.

<u>Book Value of Grid Station Equipment for FY 2012-13</u>

<u>Rs. in Millions</u>

Description	Cost	Acc Dep	Book Value.
500 Kv Grid Stations	41,009	16,948	24,060
220 Kv Grid Stations	15,590	5,991	9,600
Total	**56,599**	**22,939**	**33,660**

18.2 The Petitioner has complied with the Authority's direction. The claim has been substantiated with the documentary evidence.

19 **<u>Issue#2 Whether the Petitioner's projected General Establishment & Administration (GE&A) Costs for Rs. 6,426 million for FY 2014-15 based on provisional figure of Rs. 5,459 million in FY 2013-14 showing an increase of 18% is justified?</u>**

19.1 **<u>General Establishment Expenses</u>**

19.2 The Petitioner submitted that General Establishment includes Pay and Allowances, Employee Benefits, Staff Cost, and other Admin expenses. General Establishment requested by NTDC includes Pay and Allowances, Employee Benefits, Staff Cost, and Other Admin expenses. NTDC requested the Authority to allow Rs. 6,426 million for FY 2014-15. The Authority allowed Rs. 4,825 million to NTDC on account of General Establishment and Administration expenses for the FY 2012-13. NTDC also stated that it intends to hire 1,651 employees for critical posts which attributes to Rs. 304 Million for remaining eight months period keeping in view recruitment plan for FY 2014-15.

19.3 The details general establishment expenses have been discussed as under:

19.4 **<u>Salaries, Wages & Other benefits including induction Plan</u>**

19.4.1 According to the Petitioner being a public sector entity the pay scales of GoP is followed, hence any increase in salary and other employee benefits approved in finance bill by GoP have to be adopted by the Company under the terms of employment. The estimated

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increase of Rs. 5,670 million for the FY 2014-15 is around 23.07% over the provisional figures of Rs. 4,607 million for the FY 2013-14. While justifying the increase in the pay and allowances and employees benefits, NTDC stated that GoP has granted 10% adhoc relief on running basic pay in the annual budget for FY 2013-14, a premature increment also granted to employees on up-gradation of posts. The Impact of annual increment at the rate 6% and one running basic pay was granted to employees on the occasion of Eid-ul-Fitr. These factors resulted in overall 13.6 % increase in pay & allowances and employee benefits. NTDC further stated that for the FY 2014-15 GOP announced adhoc relief of 10%. Similarly increased the conveyance allowance @ 5% to employees of BPS 1 to 15, 20% increase in Cash Medical allowance to employees of BPS 1-15, grant of premature increment to employees of BPS 1 to 4. Moreover employee benefits include house acquisition with 25% projected enhancement in rental ceiling of acquired houses which is due to be enhanced by GoP, as per practice, during current i.e FY 2014-15. The aforementioned factors attribute an overall increase of 15% in this head.

19.4.2 The breakup of the previous years of the salaries, wages & post retirement benefits, employees benefits and leave encashment is as under:

Rs. in Million

	2011-12 Actual	**2012-13 Actual**	**2013-14 Provisional**	**2014-15 Projected**
Pay & Allowances	2,253	2,594	2,801	3,242
Employees & Benefits	699	724	849	1,072
Pension fund	723	1,501	957	1,052
New Hiring	-	-	-	304
Total	**3,675**	**4,819**	**4,607**	**5,670**

19.4.3 The Petitioner in support of new induction stated that its work force and line staff is a backbone of its progress. The management of the Petitioner along with its team is striving hard to ensure an efficient transmission network in view of increasing load growth and economic activity. To ensure efficient transmission network, the Petitioner needs competent and skilled professionals in technical, finance and administrative areas of the company. Currently the Petitioner is a staff deficient company and endeavoring to provide reliable, transmission of electricity to DISCOs and K-Electric. This situation also emerges as a result of heavy turnover due to retirement as witnessed in recent years. The following analysis clearly describes the shortage of staff in the company. According to NTDC out of 2,198 sanctioned vacant posts the Petitioner intends to hire 1,651 employees for critical posts which attributes to Rs. 304 Million for remaining eight months period keeping in view recruitment plan for FY 2014-15.

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Figures in Nos

Sr. No.	Description	Sanction Strength	Working Strength				Deficuency	%age
			Regular	Contract	Daily Wages	Total		
Officers BPS-17 &ABOVE								
a	Technical	1,051	914	11	-	925	126	11.99%
b	Non Technical	241	190	9		199	42	17.43%
Officials BPS 1 To 16								
a	Technical	3,433	2,589	209	16	2,814	619	18.03%
b	Non Technical	4,398	2,752	443	21	3,216	1,182	26.88%
c	Supportive	1,730	1,181	117	35	1,333	397	22.95%
Sub Total		**9,561**	**6,522**	**769**	**72**	**7,363**	**2,198**	**22.99%**

19.4.4 For smooth operation of transmission and transformation NTDC's role is very important. NTDC have never been restricted from hiring. However, being custodian of the rights of the end-consumer the hiring of the licensees needs to be rationalized in accordance with the best international practices adopted in other countries. The cost of hiring is borne by the end-consumer therefore in return a better service is the right of the end-consumer. However the recent tripping in last month indicates that a diagnostic analysis needs to be carried out of the NTDC in order to identify the problematic area which requires improvement. NTDC should hire the relevant staff with the objective to provide the better service to the end-consumer.

19.4.5 In the instant case NTDC have also requested for amount of Rs. 304 million on account of additional hiring. The Authority during the determination for the FY 2012-13 directed NTDC to provide proper justification for the new hiring. NTDC has submitted response in the matter. Till to date no new hiring has been made by the NTDC. The Authority considers that it would be unfair to allow the amount which is not yet incurred. In view thereof, after adjusting the amount of Rs. 304 million, the salaries, wages, post-retirement benefits has been worked out as Rs. 4,314 million as against the requested amount of Rs. 5,670 million. Keeping in view the above, for smooth operation of the transmission and transformation system, the Petitioner is allowed recruitment of employees subject to the provision of detailed justifications.

19.5 <u>Other General Establishment & Administrative Expenses</u>

19.5.1 The Petitioner in the instant case requested the Authority to allow Rs. 756 million on account of Vehicle expense, Travelling, Utilities, rent, rate & taxes, Charges for Common Services (AOH), Professional fees/Management Fee, office supplies, Advertisement & publicity, Outside Services Employed and Misc. Expenses. As per the provisional figure provided by the Petitioner the cost on the aforementioned item was Rs. 681 million for FY 2013-14 against the determined amount of Rs. 599 million for FY 2012-13. This indicated that the Petitioner demanded 11% increase as against the provisional account. The Petitioner in this regard provided the details which are as under:

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Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	Actual				Provisional	Estimated
Vehicle Expenses Maintenance	154.90	167.01	204.30	234.26	242.85	287.82
Travelling Expenses	65.94	76.18	92.95	122.16	135.52	159.29
Utilities	43.84	45.52	59.81	108.12	103.11	96.73
Rent, Rates And Taxes	32.53	37.69	46.02	72.33	74.19	76.88
Charges for Common Services (AOH)	27.23	19.53	22.19	32.29	34.64	39.84
Professional Fees/ Management Fee	13.85	9.04	5.81	14.26	46.09	46.09
Offices Supplies and Other Expenses	14.38	16.69	16.67	16.20	21.42	23.56
Advertising and Publicity	1.46	64.35	111.87	1.11	4.67	5.14
Outside Services Employed	31.38	30.29	7.53	12.92	12.94	14.23
Miscellaneous Expenses	14.56	51.96	9.35	2.66	5.72	6.15
Total	**400.07**	**518.27**	**576.50**	**616.30**	**681.15**	**755.73**
Increased % age		**29.5%**	**11.2%**	**6.9%**	**10.5%**	**10.9%**

19.5.2 The Authority during the FY 2012-13 allowed Rs. 599 million on account of other general & establishments' expenses. The actual amount arrived as Rs. 1,059 million. The main reason for higher cost is Rs. 291 million on account of legal & professional and Rs. 339 million on account of vehicle running expense. It has been further noticed that Rs. 168 million has been incurred on account of travelling expense. The NTDC did not provide supportive documents in this regard. It has been noticed that the amount requested on this account is unjustified. The NTDC requested the Authority to allow is Rs. 755.73 million on account of other general & establishment expenses for the FY 2014-15. Keeping in view the past trends and taking into account the inflation affect, the requested amount is on higher side and needs to be rationalized. Accordingly the amount of Rs. 624 million has been assessed on this account and the same is allowed for FY 2014-15.

20. **Issue# 3 Whether the projected increase in Repair & Maintenance expenditures for Rs. 845 million for FY 2014-15 based on provisional figure for Rs.607 million in FY 2013-14 showing increase of 39% is justified?**

20.1 NTDC submitted that implementation of all of its service standards and improvement of transmission network is vital to ensure the desire level of reliability of transmission network. This can only be possible through continuous repair and maintenance of Transmission Network by NTDC. Presently, NTDCL transmission network 220kV & 500kV Grid Stations/ Transmission lines are a blend of old and new which requires regular maintenance. Moreover, NTDCL grids/transmission lines confronted with every increasing demand due to GoP priority/policy to utilize existing capacity at optimum level, so repair and maintenance will surge up beyond ordinary wear & tear to maintain reliability and sustainability of the system. During the last couple of years, the maintenance cost remained on lower side due to almost stagnant growth of generation coupled with underutilized capacity owing to adverse generation mix.

20.2 According to NTDC, the present Govt. has prioritized the Power sector, in order to deal with the crises of Power sector, not only started numerous power projects and also

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emphasized for optimum utilization of available capacity. The continuous increase in the load has necessitated NTDC to ensure the reliability and sustainability of the transmission network system. To achieve this level of service NTDC have made a realistic activity wise detailed budget by keeping in view the transmission system. NTDC requested the Authority to allow an estimated amount of Rs 845.40 Million under head of repair and considering the grid wise requirements.

Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	Actual				Provisional	Estimated
Average Gross Assets	91,903	102,586	107,991	113,840	125,115	139,959
Repair & Maintenance	574	600	545	512	607	845
% age	0.62%	0.58%	0.50%	0.45%	0.49%	0.60%

20.3 The NTDC requested amount of Rs. 845 is 48% higher on the basis of provisional figures of Rs. 571 million for the FY 2013-14.

20.4 The Authority allowed Rs. 730 million to NTDC on account of repair and maintenance during the FY 2012-13.The actual amount on account of repair and maintenance for the FY 2012-13 & FY 2013-14 was Rs. 512 million and Rs. 607 million respectively. Keeping in view the Authority prescribed formula in the determination dated 19th July 2013 i.e. 0.5% of the gross fixed assets, the repair and maintenance in the instant case on gross fixed assets of Rs. 127,320 million has been worked out as Rs. 730 million and allowed for FY 2014-15 as against the requested amount of Rs. 845 million.

21. **<u>Issue#4 Whether the petitioner's projected insurance of Rs. 132 million for FY 2014-15 against the provisional amount of Rs. 119 for FY 2013-14 showing an increase of 11% is justified?</u>**

21.1 According to NTDC, the assets of the company are protected /covered under WAPDA equipment protection scheme (WEPS), in which value of insurance is calculated @ 0.30% of book value of Grid Stations. NTDC further submitted that the Insurance cost has been established at the same methodology. This usually paid on the book value and subject to change every year.

Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	Actual				Pro.	Estimated
Book value of Assets	62,128	66,343	65,583	70,470	80,037	91,589
Insurance	76.23	93.27	101.58	102.91	119.48	132.15
%age to Book Value	0.12%	0.14%	0.15%	0.15%	0.15%	0.14%

21.2 While justifying the increase, NTDC submitted that the increase in insurance cost estimate is due to addition in fixed assets. NTDC requested the Authority to allow Rs. 132.15 million for the FY 2013-14 against the provisional amount of Rs. 108 million for the FY 2013-14 showing an increase of 11%. The Authority in the determination for the

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FY 2012-13 determined Rs. 112 million on account of insurance. The breakup provided by NTDC is given hereunder:

Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	Actual				Pro.	Estimated
Book value of Assets	62,128	66,343	65,583	70,470	80,037	91,589
Insurance	76.23	93.27	101.58	102.91	119.48	132.15
%age to Book Value	0.12%	0.14%	0.15%	0.15%	0.15%	0.14%

21.3 The NTDC's calculation in the matter is not correct. The actual amount for the FY 2012-13, provisional for the FY 2013-14 and projected for the FY 2014-15 is on the basis of 0.14% instead of 0.30%. Keeping in view the actual trend, the grid stations increase seems not realistic. It has been assessed that the new grid stations will be less as compared to the requested by NTDC. After adjusting the same with the previous year the estimate grid stations for the FY 2014-15 is Rs. 85,037 million. On the basis of 0.14% the insurance amount in the instant case has been worked out as Rs. 119 million and the same is allowed for the FY 2014-15.

22. **Issue#5 Whether the petitioner's projected depreciation of Rs. 4,325 million for FY 2014-15 against the provisional amount of Rs. 4,113 for FY 2013-14 is justified?**

22.1 NTDC submitted that depreciation is also a component which may change as a result of addition or deletion in the fixed assets and would require adjustments accordingly. The depreciation for FY 2013-14 has been recorded as Rs.4,113 Million and the depreciation for FY 2014-15 is calculated on the basis of (i) Value of existing assets, (ii) Additions in existing assets during the FY 2014-15. NTDC submitted that the assets were depreciated on the basis of straight line method as per power sector practice i.e Land @ 0%, Civil works and building @ 2%, Transmission & Dispatch Equipments @ 3.5%, Furniture and fittings, other office equipments & Vehicles @ 10%. Based upon these assumptions the deprecation is worked out as under.

Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	Actual				Provisional	Estimated
Assets	98,659	106,512	109,470	118,210	132,020	146,054
Amount of Depreciation	3,782	3,639	3,717	3,854	4,113	4,325
% age to Gross Assets	3.8%	3.4%	3.4%	3.3%	3.1%	3.0%

22.2 The depreciation allowance of Rs 4,325 requested by the Petitioner for FY 2014-15 is allowed as reasonable against the provisional figure of Rs.4,113 for FY 2013-14.

23. **Issue#6 Whether the projected increase in financial charges for Rs.2,576 million for FY 2014-15 based on provisional financial charges for Rs. 1,782 million in FY 2013-14 is justified?**

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23.1 NTDC requested the Authority to allow Rs. 2,576 million on account of financial charges for the FY 2014-15 as against the provisional amount of Rs. 1,782 million of the FY 2013-14. NTDC loans pertain to foreign loans obtained by GoP from donors agencies like World Bank, ADB, JICA, KFW (Germany), and EDCF(Korea) which have been relent to NTDC @ 12% - 17% markup in accordance with relent policy of GoP. As per current relent policy GoP charges @ 15% markup on such loans. Moreover, some of the projects like Sahi-wal Sub Stations (SSS), K-ELECTRIC Interconnection, Muzaffar Garh Gatti Transmission Line, and Extension of 8-Sub Stations Project have been financed through local borrowing for which NTDC has taken local loans @ 6-Month KIBOR plus 2% to 2.15 % for these projects. The breakup of financial charges provided by NTDC is as under:

Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	Actual				Provisional	Estimated
Total Financial Charges	1,848	2,552	4,455	4,305	5,270	7,030
Allocated to WIP	819	1,570	3,650	3,557	3,488	4,454
Charged to Operation	**1,029**	**982**	**805**	**749**	**1,782**	**2,576**

23.2 The Authority during the FY 2012-13 assessed Rs. 3,729 million on account of financial charges whereas the actual financial charges are Rs. 749 million. The Petitioner was directed to substantiate its claim through provision of audited accounts. NTDC submitted the provisional accounts which are not justifying the claim of the Petitioner of Rs. 1,782 million on account of financial charges. It has been noted that Rs. 848 million has actually been charged to P&L account. Even in the FY 2012-13, the petitioner could only manage to charge Rs. 749 million against financial charges. Keeping in view the past trend of allocation of financial charges to the Profit & Loss Account, the amount of Rs. 848 million has been assessed for FY 2014-15 in the instant case on account of financial charges and the same is allowed.

24 <u>Issue#7 Whether the Petitioner's projected Return on Equity for FY 2014-15 for Rs. 16,218 million is justified?</u>

24.1 NTDC submitted that the Company was allowed Return of Equity (ROE) of 12.75% as determined by the Authority for the determination of 2004, 2006 & 2011 and improved ROE to 13.11 % in the determination of 2012-13 against requested ROE of 14.66% to enable NTDC to maintain, develop and provide reliable services for the evacuation of electricity from all the generation points across the country to at all level of transmission lines. NTDC still believes that the ROE desired @ 14.66% in the last tariff petition is legitimate keeping in view the market conditions. However NTDC has calculated return on equity @ 13.11% for FY 2014-15 as per NEPRA's last tariff determination. The Equity Base (EB) on which the return is worked out remains the same for the calculation of ROE for FY 2014-15.

24.2 According to the draft balance sheet as on June 30, 2014 the Petitioner's net fixed assets in operation were Rs. 66,179 million, stores and spares were Rs.9,205 million (including stores held for capital expenditure that could not be identified separately), trade debts were to the tune of Rs.357,219 million, cash and bank balances were Rs. 19,114 million and capital works in progress was Rs.59,735 million. The long-term liabilities were Rs.35,179 million, employees' retirement benefits Rs. 16,262 million and creditors, accrued and other liabilities were Rs.535,518 million. Incorporating the corresponding estimated figures as discussed in earlier paragraphs the EB for the FY 2014-15 is assessed as Rs.71,510 million (detailed working indicated as Annexure I & II). Accordingly ROE for the FY 2014-15 has been assessed as Rs. 9,375 million against Rs. 16,218 million requested by the Petitioner.

25 **Issue#8 Whether the Petitioner's Prior Year Adjustments (PYA) for Rs. 3,610 million for FY 2012-13 & for Rs. 3,855 million for FY 2013-14 respectively are justified?**

25.1 The Petitioner claimed prior year adjustments of Rs. 3,610 million and Rs. 3,855 million for the FY 2012-13 & FY 2013-14 respectively. In order to justify its claim for PYA, the Petitioner submitted the working for un-recovered costs as per following details:-

a. **Unrecovered Cost of FY 2012-13**

25.2 According to the Petitioner NEPRA allowed revenue requirement amounting to Rs. 21,137 million for the FY 2012-13 was determined on July 19, 2013 which was notified on September 24, 2013. The tariff was notified in FY 2013-14 and due to delayed tariff determination and notification warrants the Petitioner to claim unrecovered cost in the present tariff petition accordingly. The detail of uncovered cost for FY 2012-13 is summarized below:

	Rs (Million)
Revenue determined by NEPRA for FY 2012-13	21,137
Actual Revenue earned for FY 2012-13	(16,782)
Total Variance	**4,355**

25.3 According to NTDC total variance is comprised of two variances i.e Price variance and Volume variance.

Price Variance

{Tariff rate determined (2012-13) – Tariff rate applied (2011-12)} x Average Actual MDI for FY 2012-13

(Rs.102.43 – Rs.85.91) x 16,279* MW =Rs.3,227 Million

Volume Variance

(NEPRA determined MDI – Actual MDI) x Rate Determined by NEPRA

(17,196 MW – 16,279 MW) x Rs.102.43** =Rs.1,128 Million

Total Variance = Price Variance + Volume Variance

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Total Variance = (3,227 +1,128) = **Rs. 4,355 Million**

*Average Monthly MDI
** Rs./kW/Month

b. Adjustment of Loans against K-ELECTRIC (now K-Electric) payables towards NTDC

25.4 The Petitioner submitted that K-Electric was charged hourly marginal cost rate for billing of energy cost. Economic Coordination Committee (ECC) of the Cabinet on September 03, 2008 decided that K-ELECTRIC (now K-Electric) would be treated at par with DISCOs for invoicing/billing of energy cost purposes. Accordingly a committee was constituted for determination and settlement of balances between NTDC and K-ELECTRIC. On the recommendations of ECC it was decided that a partial transaction of difference between the two rates amounting to Rs. 31,000 Million would be settled by Government of Pakistan (GoP) with NTDCL against GoP Foreign Relent Loans including outstanding markup of Rs. 24,610 Million but adjustment of this transaction by GoP is still awaited. Therefore, NTDC continued to incorporate accrual of markup in its books for the period from FY 2009-10 to FY 2011-12 amounting to Rs. 9,050 Million, out of which Rs. 5,892 Million were expensed out as financial charges charged to operations with yearly impact of Rs. 1,964 Million as accrued expense and balance amount of Rs. 3,158 Million were charged to WIP as IDC. In June 2013 GoP adjusted Rs. 2,540 Million as non cash adjustment and did not claim any markup on the balance outstanding amount of loan. Therefore, NTDC has reversed accrued markup charged up till now. This debt-equity swap has impact on component of Use of System Charge (UoSC). In the preceding years these loans were considered as part of debt portion in the capital structure of the Company and used to accrue financial charges on these loans. Thus the capital structure of the Company has been transformed in which loans were reduced and equity has risen by corresponding amount of loan. Resultantly financial charges of the company will be reduced and return on equity component of Use of System Charge (UoSC) has also increased.

25.5 In the wake of above situation the whole transaction has been observed since its inception within the tariff regime of NEPRA. It reveals that tariff will not be significantly impacted as it is a mere change in the head of revenue requirement.

25.6 However, an overall impact has been calculated to the tune of Rs 745 Million which has been over claimed by the petitioner since the occurrence of this transaction and the same has been adjusted in the Uncovered Cost of FY 2012-13. A comparison of financial charges claimed in the tariff and resultant increase in return on equity is tabulated below:

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Description	Actual 2008-09	Actual 2009-10	Actual 2010-11	Actual 2011-12	Total
ROE after adjustment of KESC Loans (excluding Loans)	8,894	9,401	10,290	11,125	39,710
ROE without adjustment of KESC Loans (including loans)	6,633	7,453	8,564	10,089	32,739
Difference (A)	**2,262**	**1,949**	**1,726**	**1,035**	**6,971**
Accrued mark-up expensed out **(B)**	1,824	1,964	1,964	1,964	7,716
Net (Benefit) /Loss to NTDCL (A-B)	**437**	**(15)**	**(238)**	**(928)**	**(745)**

25.7 The Petitioner was directed to provide the documentary evidence along with calculations in this regard. According to the draft audited accounts the amount has been verified on this account. After considering the draft audited accounts net uncovered cost for the FY 2012-13 after adjustment of K-ELECTRIC loans is as follows:

Total (Price & Volume) Variance	=	4,355
Adjustment of K-ELECTRIC loans	=	(745)
Net Uncovered Cost For FY 2012-13	=	**3,610**

25.8 After analyzing the submission of the Petitioner regarding PYA for FY 2012-13, the stance of Petitioner is justified due to the delayed tariff notification which was issued in September 2013 after the lapse of FY 2012-13. Accordingly the assessed amount of Rs. 3,610 million is included in revenue requirement of the Petitioner for the FY 2014-15.

c. **Uncovered cost for FY 2013-14**

25.9 The Petitioner submitted that the tariff for FY 2012-13 was notified in FY 2013-14 therefore NTDCL could not file tariff petition for FY 2013-14. Resultantly NTDCL was remained unable to fulfill its entire financial obligations. According to NTDC the tariff for the FY 2013-14 has been calculated in line with the tariff methodology of NEPRA and the same has been compared with the provisional results of FY 2013-14. NTDC requested the Authority to allow Rs. 3,855 million on account of uncovered cost for the FY 2013-14.

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Sr No	Revenue Requirment	NEPRA Rs.102.43 /kW/Mont	2013-14 (Prov)	Desired	Uncovered Cost FY 2013-14
1	GE&A (including CPPA)	4,825	5,459	-	634
2	Repair & Maintenance	595	607	-	12
3	Insurance	112	119	-	7
4	Depreciation	4,083	4,113	-	30
5	Financial Charges	3,729	1,782	-	(1,947)
6	Transmission Losses	-	1,125	-	(1,125)
7	Return on Equity	9,329	7,739	13,569	5,829
8	Income Tax	-	-	-	-
9	**Total**	22,673	20,944	13,569	3,440
10	Less: other income	(1,536)	(1,121)		415
11	**Total Revenue Requirment**	**21,137**	**19,823**		**3,855**

25.10 The NTDC did not submit the petition for determination of transfer/wheeling charges for the FY 2013-14. The inefficiency of the Company cannot be passed on to the end-consumer. The NTDC's stance therefore in this regard is not correct since the responsibility of the filing of the petition for justification of the claim lies upon the Petitioner. The self assessment of the NTDC is therefore not acceptable. In view thereof the NTDC's request on this account is not accepted.

26. Issue#9 Whether the Petitioner's projected Other Income of Rs. 1,320 million for the FY 2014-15 against provisional amount of Rs. 1,121 million is reasonable?

26.1 According to NTDC other income includes income of services rendered to DISCOs, IPPs in shape of planning, telecommunication, design, mark up on bank deposits, amortization of deferred credit, etc. NTDC submitted that due to declining trend in KIBOR rates during the preceding years, there has been a decline in profit rates on bank deposits. The average annual increase during the last three financial years has been applied on the estimation of profit on bank deposits and income of service rendered to DISCOs and IPPs.

Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
	Actual				Prov:	Esti:
Other Income	1,096	1,127	1,396	1,040	1,121	1,320

26.2 The Authority during the FY 2012-13 assessed Rs. 1,726 million on account of other income whereas the actual amount was Rs. 1,040 million. Considering the previous trend of the other income the requested amount seems reasonable therefore Rs. 1,320 million is assessed for FY 2014-15.

27. Issue#10 Whether the proposed Average Monthly MDI MW/Month 17,594 MW by the petitioner is justified for FY 2014-15.

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27.1 NTDC calculated the revenue requirement on the basis of average monthly MD/month of 17,594 MW for the FY 2014-15. According to NTDC, overall 4.23% growth of MDI (Maximum Demand Indicator) MW for FY 2014-15 is assumed and therefore estimated demand worked out on the basis of DISCOs projected demand of 4.78 % and same has been attributed to DISCOs after considering the flat demand of 650 MW of K-Electric.

27.2 LESCO vide its letter No. 253/CEO/LESCO dated March 2, 2015 raised few reservations regarding the calculation of Maximum Demand Indicator (MDI) which is being charged as per the non-coincidental basis.

27.3 The Authority noted that the Petitioner was directed in the tariff determination dated 9th May 2011 to install the digital meters at Common Delivery Points (CDPs). During the hearing on the query of the Authority, it was responded by the NTDC that the digital meters have been installed at CDPs. The Authority considered that in accordance with the previous determination, MDI should be charged on the maximum demand recorded on the Common Delivery Points (CDPs) of the DISCOs during the billing period at the particular time on coincidental manners. In order to arrive at just and informed decision, the Authority considered it appropriate to arrange the consultative session of the CPPA/NTDC and Distribution Companies.

27.4 Accordingly the consultative session was arranged on 19th March 2015. Individual letters in this regard were issued to CPPA/NTDC, LESCO, GEPCO, FESCO, MEPCO, LESCO, IESCO, HESCO, SEPCO, PESCO and TESCO. The CPPA is charging MDI on Authority's determined mechanism which is as under:

XWD = The sum of the maximum demand of the XWDISCOs in KW recorded during a billing period at all the delivery metering points at which power is received by the XWDISCOs.

27.5 During the meeting CPPA/NTDC and Distribution Companies discussed the calculation of MDI and have showed certain reservations. Accordingly CPPA / NTDC and Distribution Companies were directed to come up with the agreed mechanism. In response only LESCO & SEPCO have submitted the comments. NTDC also on 31st March 2015 submitted the following comments;

- NTDCL charges Capacity Transfer Price and transmission / wheeling charges to a DISCO on the basis of Maximum Demand recorded during a billing period as per NEPRA approved mechanism in its tariff determination. Maximum demand (kW) of DISCOs is measured through digital energy meters installed at their electrical boundaries called Common Delivery Points (CDPs) by designated metering committee(s) having one member of the respective DISCOs. MDI being charged is worked out on non-coincidental basis.

- It is pertinent to mention that NTDCL has to recover its Annual Revenue Requirement of the transmission system from DISCOs through wheeling charges (Rs./kW/month) as per NEPRA approved mechanism. Consideration of the maximum demand data on co-incidental basis may only change the rate of

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wheeling charges (Rs./kW/month) without affecting the NTDCL total annual revenue requirement.

- It is stated that NTDCL, under Secured Metering System (SMS) project have installed latest Digital Meters at all CDPs throughout the country declaring these meters as Primary meters and is also in the process of online acquisition of metering data from these meters. ***Maximum demand data on co-incidental basis available online is being complied on the test run basis. Finalization of the same may take some time. CPPA -NTDC on finalization of maximum demand data on co-incidental basis shall be able to share the same with all DISCOs.***

27.6 NTDCL have shown its constraints to provide data with respect to the MDI and submitted that it require some time for finalization of the same. The Authority considers that the Petitioner's concerns with respect to provision of information are valid. Furthermore, for the purpose of transparency the required data needs to be shared with the stakeholders for input /comments. The Authority further considers that the tariff petition of NTDCL is time bound case and have to be finalized within stipulated time period given in the Tariff (Standards & Procedure) Rules - 1998 therefore considering the request of the Petitioner legitimate, the Authority has decided that the current petition be determined on the basis of existing mechanism of MDI calculation. However, the Petitioner is directed to file the next tariff petition of FY 2015-16 on the basis of calculation of MDI on co-incidental basis.

27.7 Keeping in view the current trend of the power generation, the Authority noted that the NTDC's projected MDI for FY 2014-15 seems on higher side. Although new power plants have been added however considering the transmission line constraints the MDI per month needs to be rationalized with the MDI calculated in the case of Distribution Companies. For Distribution Companies the Authority has assessed MDI of 16,679 MW. Considering the same assessment of MDI reasonable, the Petitioner's revenue requirement has been calculated on the basis of MDI of 16,679 MW for FY 2014-15.

28. Issue#11 Whether the Petitioner's proposed Investment program of Rs 32,625 million for the FY 2014-15 is justified?

28.1 NTDC has proposed a development program of Rs. 32,625 million for FY 2014-15. The investment as per audited/draft financial statements showing Rs. 9,757 million for FY 2012-13 and Rs. 23,893 million for FY 2013-14. As per the Petitioner the amount required for investment is incurred to provide the smooth and reliable services. Development Program is required for expansion / enhancement of NTDC Transmission network for evacuation of power to meet future demand of the Distribution Companies.

28.2 While justifying investment program, NTDC submitted that being national Grid Company of the country, NTDCL is solely responsible for overall reliability, planning and coordination of the electricity transmission in Pakistan except the area under K-Electric. The Petitioner has been vigorously pursuing its system expansion / augmentation especially construction of new grids, transmission lines, adding new transformers at the existing grid stations and augmentation of the transformers with higher capacity.

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28.3 According to NTDC, the announcement of upfront tariff from wind based energy power projects at Jhimpir and Gharo clusters has attracted interest of investors for more than 2000 MW of generation capacity. Similarly Federal & Provincial governments are promoting solar energy by attracting fast track projects such as 1000 MW Quaid-e-Azam Solar Park (a priority of 100 MW up till December 2014), other ongoing prioritized projects such as 969 MW Neelum Jehlum Hydro Project and 630 MW (2x315) Chashma C-III & C-IV Nuclear Projects are expected to be substantially completed by the end of 2015. Therefore, it is imperative to build Extra High Voltage (EHV) transmission lines and grid stations before the COD of these projects. These projects involve substantial capital investment with PC-I Cost of Rs. 40,115 million for which at present no donor is available and NTDC own sources/return on equity seems not enough to meet this critical situation. NTDC management is committed to exert all its optimal efforts to execute these prioritized projects through return on equity as well as to approach and negotiate for local financing arrangements keeping in view the limited time constraints. Presently, negotiations have initiated for local financing in respect of Neelum Jehlum Hydro project whose priority segment is expected to be completed by December 2015. Further, other vital projects like Jamshore-Moro, UCH-II high voltage transmission lines etc. have also been planned and included in the investment plan.

28.4 In addition to above mentioned projects, NTDC is also endeavoring to enhance reliability of existing transmission network of 500/220kv grid system by deploying 13 Nos transformers which are being imported from Iran having capacity of 250 MVA each with PC-I cost of Rs. 3,900 million through own sources. NTDC has also worked out a plan to replace depleted material /equipment to strengthen the system amounting to Rs 1,739 million to be financed by ADB. NTDC management is also planning for interconnection facilities to evacuate power from across the border projects like proposed project for construction of cross–border interconnection transmission line at 500kV in respect of proposed Central Asia-South Asia (CASA-1000) a 1300 MW project, linking the four countries Kyrgyz Republic, Tajikistan, Afghanistan & Pakistan, to facilitate the transfer of surplus power from Central Asian countries to Pakistan and import of 1000 MW power from Iran to Gawadar. According to NTDC Government of Pakistan in near future is planning to undertake some new ventures involving extraordinary investment for erection of power evacuation facilities like Gadani Power Park 6600 MW, KII/KIII 2400 MW Nuclear Project at Karachi and Dasu Hydel Project 4500 MW capacity for which NTDC present tariff structure would not support, thus NEPRA is requested to suggest some tariff mechanism to cater heavy financing involved for the execution of these projects.

28.5 Apart from above new critical projects, NTDC has also executing ongoing projects of vital importance, some of them are near to completion and others will likely to be completed in the next 12-24 months. These projects will be a good addition to enhance/strengthen our transmission system capacities. Keeping in view the prioritized projects NTDCL Investment Program is made up of two broad categories:

i- On Going Projects
   a) Vital Projects

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b) Other Projects

Rs. Mln

Description	PC-I Cost			Estimated for FY 2014-15		
	Local	Foreign	Total	Local	Foreign	Total
On- Going Projects						
Vital Projects	38,070	48,095	86,165	3,770	3,400	7,170
Other Projects	19,459	18,936	38,395	598	50	648
Sub Total	**57,529**	**67,031**	**124,560**	**4,368**	**3,450**	**7,818**

28.6 The Project wise detail of NTDCL ongoing vital & other Projects are tabulated below.

Rs. Mln

Sr No.	Project Name	PC-I Cost			Budgeted for FY 2014-15		
		Local	Foreign	Total	Local	Foreign	Total
1	220 KV G/S at Ghazi Road, Lahore with 220 KV D/C T/Line 132 KV Expansion System	1,325	1,267	2,592	250	500	750
2	Power Transmission Enhancement Project (Tranch-II) (SET)10 Sub projects (i) 9 Sub Projects of 500KV & 220KV S/S& T/Lines	9,275	10,918	20,193	700	1,000	1,700
3	220/132KV Dera Murad Jamali Sub Station	415	465	880	500	-	500
4	Addition of 500/200KV Sub Station T/L for Strengthing the existing NTDC system i) 500KV Lahore New ii) 500KV Shikarpur iii) 220KV D.I.Khan	11,078	13,450	24,528	800	1,000	1,800
5	4 Nos New Projects to be financed by JBIC (i) 500 KV RY Khan G/S & T/L (ii)220 KV Chishtian T/L (iii) 220 KV Gujrat G/S & 220 KV T/L (iv) 220 KV Shalamar G/S & 220 KV T/L (4 Projects - JBIC Loan)	5,365	7,787	13,152	500	800	1,300
6	Imported of 100 MW Power from Iran (with 220KV G/S Gowadar and allied T/L form Iran to Gowader funded by Iran	1,730	1,934	3,664	300	-	300
7	Power Transmission Enhancement Project Tranch-I (19 Sub Projects of 500/220 KV Sub Stations and T/ Lines)	4,503	8,114	12,617	320	-	320
8	New 220 KV G/Station at Khuzdar/220 KVDadu - Khuzdar D/C T/Line	4,380	4,160	8,540	400	100	500
9	Others	19,459	18,936	38,395	598	50	648
	Total	**57,529**	**67,031**	**124,560**	**4,368**	**3,450**	**7,818**

ii- New Projects

a. Critical projects
b. Vital projects
c. Other projects

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Rs Mln

Description	PC-I Cost			Estimated for FY 2014-15		
	Local	Foreign	Total	Local	Foreign	Total
New Projects						
Critical Projects	19,410	22,047	41,456	6,377	6,000	12,378
Vital Project	36,172	45,336	81,508	2,560	6,000	8,560
Other New Projects	39,873	81,173	121,045	1,070	2,800	3,869
Sub Total	95,454	148,555	244,009	10,007	14,800	24,807

28.7 The Project wise detail of NTDCL new critical , vital & other projects are tabulated below:

New-Critical Projects

Rs.Mln

Sr No.	Project Name	PC-I Cost			Budgeted FY 2014-15		
		Local	Foreign	Total	Local	Foreign	Total
1	Traansmission for Dispersal power from Neelam-Jehlum Hydro Power Project	8,951	12,717	21,668	-	6,000	6,000
2	Interconnection of Chashma Neculer (C-3&C-4)	1,485	1,618	3,103	1,500	-	1,500
3	Quaid-e-Azam Solar Park at Lal-Suhanra (Phase-II) Evacuation of 600 MW Solar (Prposed to be carried out by NTDC)	2,161	1,905	4,066	1,918	-	1,918
4	Evacuation of power from wind power projects at Jhimpir and Gharo Wind Clusters	5,996	5,282	11,278	2,959		2,959
	Total	18,593	21,522	40,115	6,377	6,000	12,378

New- Vital Project

Rs.Mln

Sr No.	Project Name	PC-I Cost			Budgeted FY 2014-15		
		Local	Foreign	Total	Local	Foreign	Total
1	3rd 500KV Jamshoro-Moro- R.Y Khan Single Circuit T/Line.Tranch-III	17,400	19,834	37,234	500	3,000	3,500
2	Transmission Interconnection for Dispersal of Power From UCH-II Tranch-III	1,219	1,289	2,508	250	1,000	1,250
3	Augmentation of 500/220KV & 220/131KV Transformer in NTDC System New	766	3,129	3,894	1,300	-	1,300
4	Depleted Material Tranch-III (Now Replacement of Depleted Matrial at existing grid station of NTDC System) ADB Loan No. 2846-PAK	336	1,403	1,739	110	1,000	1,110
5	Interconnection scheme for import of power from CASA-1000	12,878	16,415	29,293	400	1,000	1,400
	Total	32,599	42,070	74,669	2,560	6,000	8,560
	Others New Projects	39,873	81,173	121,045	1,070	2,800	3,869
	Grand Total	152,984	215,586	368,569	14,375	18,250	32,625

Projects completed During FY 2013-14:

28.8 To strengthen the existing as well expansion of system the following assets have been capitalized during 2013-14:

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Sr. No	Name of Projects
1	220 KV Grid Station Shalamar, Lahore.
2	220KV Dadu-Khuzdar D/C T/Line & 220KV Grid Station at Kuzdar
3	220 KV grid Station & Bandala. And Accociated T/Line
4	220 KV Rohri Grid Station and accociated T/Line
5	550 Kv D.G Khan SubStation
6	Up Gradation of NPCC Islamabad
7	220 Kv Grid Station Loaralai T/L Grid Station
8	220 KV grid Station & Transmission Line Okara.
9	Transmission Line Kassowal

Projects Expected to be completed during FY 2014-15

28.9 Following grids /transmission lines are expected to be added in the system during FY 2014-15.

Sr. No	Name of Projects
1	220Kv Toba Tek Singh Grid Station & accociated T/Line T-II
2	500 Kv Ghazi Barotha Extension T-II
3	220 Kv Grid Station Kassowal
4	220 Kv Chishtian Sub station & accociated T/ Line
5	SVC at Kot Lakhpat Lahore
6	220KV Dadu-Khuzdar D/C T/Line & 220KV Grid Station at Kuzdar JICA -
7	220 KV Rohri Grid Station and accociated T/Line
8	Tranche-I, DG Khan-Loralai T/Line Project

28.10 The analysis of investment in fixed assets over the last three years revealed that the Petitioner's could spend around Rs. 9.8 billion, Rs. 13.5 billion, Rs. 16.4 billion, Rs. 14.8 billion, Rs.9.8 billion and Rs. 23.9 billion for the FY 2008-09, FY 2009-10, FY 2010-11,FY 2011-12, FY 2012-13 and FY 2013-14 respectively. The Authority allowed Rs. 15.62 billion investment program to the Petitioner in the determination of FY 2012-13 against the actual amount incurred as per audited accounts of Rs. 9.8 billion.

28.11 The Authority is cognizant of the fact that the Petitioner's submission is quite reasonable in terms of investment required and in the wake of evacuation of power from the upcoming power plants. The Petitioner's constraint regarding liquidity crunch can be analyzed from the financial statements for the last six years. The financing of the transmission line is the responsibility of the NTDC. The efforts should be made to complete the abovementioned tasks. NTDC may request the Ministry of Finance through its parent department Ministry of Water & Power for arrangement of funds. Having considered all the relevant information and financing plan, the Authority approves the

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investment plan of Rs. 18,600 million for the FY 2014-15. The Petitioner can however undertake the projects which are critical in order to ensure power evacuation of upcoming power projects subject to availability of funds. The Petitioner however needs to submit progress report in this regard to the Authority on quarterly basis. Any variation on the basis of actual investment will be adjusted under the relevant head in the subsequent years.

29. **Issue#12 Whether the petitioner's request for adjustment of T&T losses with an impact of Rs.2,332.39 million for FY 2012-13 is justified?**

29.1 NEPRA in its determination of April 14, 2004 assessed 2.5% Transmission and Transformation (T&T) losses for 500kv and 220kV systems of NTDC. The same benchmark for T&T losses @ 2.5% was maintained by NEPRA in its determination of January 6, 2006 and determination of May 9, 2011. Further, the Authority in its determination of July 19, 2013 revised the benchmark for T&T losses from 2.5% to 3% with the direction to conduct independent study of T&T losses. Accordingly, NTDC appointed M/s Power Planner International (PPI) as consultant for independent evaluation of T&T losses. The consultant has shared the draft report with GM Planning (Power) NTDC which is likely to be finalized by the mid of October, 2014. The same will be submitted to NEPRA on its finalization accordingly. NEPRA determined the tariff for FY 2012-13 on July 19, 2013 and notified the same in September 24, 2013. In the said determination, the benchmark of T&T losses were revised from 2.5% to 3%. Due to delayed notification the petitioner could not incorporate the revised benchmark in the relevant year i.e FY 2012-13 hence the petitioner has the legitimate right to recover the same as uncovered cost in the current tariff petition. The impact is calculated as under:

Impact of T&T Losses

(Rs. in Million)

Month	Cost Beyond 2.5%	Cost Beyond 3%	Difference of Unrecovered Cost
Jul-12	785.99	452.56	333.43
Aug-12	972.83	667.15	305.68
Sep-12	506.78	238.12	268.66
Oct-12	609.09	337.80	271.29
Nov-12	386.60	142.97	243.63
Dec-12	343.54	62.24	281.30
Jan-13	654.85	337.27	317.58
Feb-13	376.72	157.35	219.38
Mar-13	91.43	-	91.43
Apr-13	-	-	-
May-13	-	-	-
Jun-13	-	-	-
Total	4,727.83	2,395.45	2,332.39

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29.2 The claim of the Petitioner was scrutinized and checked in detail from monthly submissions by the CPPA and the amount of T&T losses due to increase of cap from 2.5% to 3% worked out as Rs. 2,320 million. The above table also exhibits that NTDC has legitimate right to claim as uncovered cost for FY 2012-13. Though it would not cast a direct impact on the tariff but an adjustment will be made in the future billing to DISCOs & K-Electric and trade receivables of NTDC will be adjusted by Rs. 2,320 million accordingly.

29.3 Having gone through the submission of the Petitioner's claim against T&T losses, the Authority considers that NTDC's claim is established since the revenue requirement for the NTDC was determined for the period i.e. 1st July 2012 to 30th June 2013. The T&T losses were allowed maximum upto 3% therefore the verified amount being in line with the determination of the Authority is approved. However, the adjustment on this account should be made by NTDC in the future invoices of CPPA to all DISCOs including K-Electric.

30. <u>Issue#13 Whether the petitioner's request for adjustment of T&T losses from FY 2009-14 with an impact of Rs. 14,671 million is justified?</u>

30.1 The Petitioner submitted that benchmark set by NEPRA is on yearly basis but unfortunately NEPRA is gauging NTDC losses on monthly basis which is based on yearly benchmark thus by ignoring the numerous factors as explained above which having been causing huge financial loss to the Company. The losses already gauged by NEPRA may be adjusted accordingly. It is therefore proposed that:

- NEPRA may allow us T& T losses by considering the uncontrollable factors like seasonal impact, generation mix, system constraints and distance of load centre to supply point to end-users and Government priority to supply electricity major urban areas, etc. to safeguard the petitioner from huge financial loss.

- T&T losses which allowed @ 2.5% -3.0% from FY 2009-10 to FY 2013-14 was actually yearly benchmark and the same has been applied by NEPRA to gauge the monthly T&T losses. Resultantly NTDCL is not able to recover its cost of service fully and return on equity (ROE) also affected adversely. It is therefore suggested that adjustment on yearly based benchmark for T&T losses may please be determined at the end of financial year instead of monthly basis. The losses amounting to Rs. 14,671/- Mln from FY 2009-10 to FY 2013-14 which have already been disallowed may be adjusted/ actualized on the basis of respective yearly benchmark.
- The total T&T losses sustained by the Company are tabulated below:

Rs. Mln

Description	2009-10	2010-11	2011-12	2012-13	2013-14	Total
	Actual				Provisional	
Transmission losses	3,571	2,916	2,331	4,728	1,125	14,671
% age of Losses	3.40%	3.00%	2.80%	3.01%	2.43%	-

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30.2 In order to assess the T&T losses of the NTDC, it was directed to provide the detailed technical study. NEPRA based on the recommendations of the technical division in the determination dated 19th July 2013 allowed T&T losses up to 3%. Being quasi judicial body NEPRA rely upon the documentary evidence for substantiation of the claim requested. The fuel price adjustment is made on monthly basis and accordingly the 3% upper cape was allowed. NTDC was directed to provide the detail reasoning for huge variation in the T&T losses however NTDC was unable to provide justification in this regard. Furthermore, the increase in T&T losses is not justified with the huge investment allowed to the Petitioner. In the instant case no justification / rationale / basis are submitted which require review with respect to the monthly T&T losses adjustment. As regards the arrears with respect to T&T losses., the stance of the NTDC is not correct since the T&T losses period was from 1st July 2012 to 30th June 2013 the adjustment of which is already allowed. Despite several directions issued to NTDC in the determinations of the Authority, NTDC was unable to submit the technical study with respect to T&T losses. In the absence of T&T study, the Authority refuses to entertain the NTDC's request in this regard. Therefore prior period cost of T&T losses requested by NTDC is not justified. As regards the annual adjustment of T&T losses, the Authority considers that the Petitioner stance with respect to seasonal variation in T&T losses is correct. The Authority allowed 3% maximum cap in the previous determination for the FY 2012-13. Since the T&T loss varies on monthly basis therefore the Authority approves it to be adjusted on yearly basis.

31. <u>Issue#14 Whether the Annual Development Program for Rs. 811 million for FY 2014-15 is justified with its cost/benefits?</u>

31.1 The Petitioner submitted that it requires to procure 500/220kV equipments for operational needs of material / equipments for smooth functioning of transmission network of NTDC. In addition to this, vehicles are important means to transact the business, keeping in view the scarcity and conditions of present vehicle fleet of NTDC it is imperative to add new vehicles. Computers are also necessary gadgets to fulfill daily work needs; in this regard the Petitioner intends to purchase computers to meet the needs of formations. The Petitioner, being a sole transmission company operating throughout the country may face problems in system during the year so that a provision of contingencies made under emergent work/ sabotage activities. In order to meet with the requirements of residential and office building needs GSO regions of the Petitioner are engaged in civil work. A provision for security needs is also included to safeguard Petitioner's vital assets such as warehouses, NPCC and vulnerable grids located in KPK and Baluchistan. The following details has been provided by the Petitioner:

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Rs. In Million

Description	GSO Regions				Other Formation	Total
	Lahore	Islamabad	Hyderabad	Multan		
Procurement of Material/Equipment for GSO Regions to be procured for F.Y 2014-15	55.30	35.20	18.18	33.05	-	141.73
Vehicles for Opertions Purpose	145.74	11.47	36.53	7.16	1.38	202.28
Computers and Accesories	2.14	2.03	1.41	2.27	37.17	45.02
Emergent Work (Contigencies)	-	-	-	-	100.00	100.00
Total - A	**203.18**	**48.70**	**56.12**	**42.48**	**138.55**	**489.03**
Civil Works for GSO regions	50.00	39.00	36.00	28.00	42.50	195.50
Civil Work/ Procurement of Security Equipment	3.50	2.40	7.08	24.83	89.14	126.94
Total - B	**53.50**	**41.40**	**43.08**	**52.83**	**131.64**	**322.44**
Total: (A+B)	**256.68**	**90.10**	**99.20**	**95.31**	**270.19**	**811.48**

31.2 NTDC role is very important keeping in view the transmission and transformation services provided in the country. Capital expenditure is necessary part of the expansion policy of Company for meeting the growing requirement of the organization. The capital expenditure is not part of the project investment. Considering the request, the Authority hereby allows Rs. 811.48 million for FY 2014-15.

32. **<u>Issue#15 Whether the detail of investment program of ongoing and new project and cost incurred on these projects claimed by the petitioner is justified? Whether the detailed studies have been carried out to indentify new projects? Whether an (n-1) criterion has been assured?</u>**

32.1 The Petitioner stated that the detailed studies have been carried out and n-1 criterion has been assured, further it submitted that projects are justified. The Studies submitted by the Petitioner for justification of new projects are based on standard acceptable criteria as acknowledged by the technical division. The submission of the Petitioner is satisfactory in this regard.

32.2 Having considered the submission of the Petitioner the Authority considers that the Petitioner's response is satisfactory.

33. **<u>Issue#16 What steps have been taken for undertaking Extra High Voltage (above 500kV AC) or HVDC system induction in the existing network?</u>**

33.1 The Petitioner stated that at present it does not have any plan to go above 500 kV HVAC system. However, it planned + 500kV HVDC for CASA 1000 project from Pak-Afghan border to Peshawar (100 km). Further, the Petitioner has proposed + 600 kV HVDC transmission lines for evacuation of power from Thar coal based generation, K-1, K-2

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Nuclear Power Plants and upcoming imported coal based power plants at coastal area of Karachi. The + 600 kV HVDC transmission lines will be under taken in the private sector.

33.2 The Petitioner is responsible for transporting power from CASA and other imports including 1000 MW from IRAN. The Petitioner has not shared any information regarding 500 kV HVDC Transmission Line for dispersal of 1000 MW power from Tanavir Iran. In view thereof NTDC is hereby directed to submit the aforementioned information within 30 days of issuance of this determination.

34. <u>Issue#17 What steps have been taken for preventing the transmission system breakdowns resulting in blackouts and tripping during the foggy weather?</u>

34.1 The Petitioner submitted that Crash Maintenance work of Transmission Lines is in Progress since September, 2014 for washing/cleaning/replacement of flash over/punctured Disc Insulators to minimize the tripping.

GSO Region	T/Line	Washed	Cleaned	Replaced
Islamabad	500 kV	1,932	55	100
	220 kV	60	60	55
Hyderabad	500 kV	122,530	28,094	258
	220 kV	18,108	15,474	22
Lahore	500 kV	750	146,764	7
	220 kV	13,465	8,571	730
Multan	500 kV	74,920	-	-
	220 kV	99,168	-	222
Total		200,132	174,913	365
		130,801	24,105	1,029

34.2 The Petitioner's response is not satisfactory and therefore not acceptable in view of the number of tripping in different parts of the country, which resulted in breakdown of transmission system. In view thereof the Authority hereby directs the Petitioner to carry out detailed inquiry of the tripping and submit the detailed reports along with the plan to cater for such incidents in future.

35. <u>Issue #18 Whether the qualification of the external auditor in financial statements for FY 2012-13 is justified?</u>

35.1 NTDC submitted that the Company on advice of PEPCO has transferred loans amounting Rs. 239.5 Blns to DISCOs out of which loan of Rs. 178.5 billion were not acknowledged by DISCOs. As a result mark-up on such loans amounting to Rs. 5.6 Blns which has not acknowledged by those DISCOs. We are unable to determine how this mark-up will be

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recovered and over which period the recovery will be made. Out of 178.5 billion in Financial Year 2013-14 Rs. 55 Blns has been recognized by the respective DISCO, for adjustment of balance loans NTDC is making efforts.

35.2 The Company advanced Rs. 2.3 billion (2012: Rs. 2.3 billion) to Japan Power Generation Limited (JPGL) for purchase of power, whereas JPGL has acknowledged Rs. 1 billion only. In respect of this, we have noted that the Company has long outstanding disputes with JPGL and matter has also been referred to International Court of Arbitration and the management has also been negotiating with JPGL for recovery of advance and certain other unaccounted for claims. We have further noted from the latest available audited financial statements of JPGL that its financial position is adverse whereby their equity has been eroded and its total liabilities have exceeded its total assets. Despite the forgoing facts, no provision has been made in these financial statements against such advance. There is dispute between JPGL and WAPDA under the provisions of PPA. The Final reward has been received in current Financial year, as per reward Rs 720 million is receivable from JPGL, however both JPGL and the Power Purchaser has reservations on its implementation. The implementation is under consideration at Board Level.

35.3 National Electric Power Regulatory Authority (NEPRA) notified revised tariff for the Company relating to financial year 2012-13 through notification no. NEPRA/TRF-226/NTDC-2013/8916-8918 dated 19 July 2013. Under the revised tariff, the rates for the use of system charges has been increased while the limit for transmission losses has also been increased. In this regards, the Company has not incorporated the financial impact of aforesaid revised tariff in the financial statements for the year ended 30 June 2013. Owing to non-availibity of certain reports, the financial impact of the aforesaid adjustment could not be ascertained. Sales are higher by Rs. 3.2 Blns and operating expenses are suppresed by Rs. 2.3 Blns and Profit after tax was higher Rs. 2.3 billion. NTDCL requested tariff revision for FY 2012-13 to NEPRA, and GoP notified the tariff at the end of Ist Quarter of FY 2013-14, hence NTDCL remained unable to avail the benefit of the revised tariff retrospectively. However, NTDCL claimed the uncovered cost for FY 2012-13 & 2013-14 in the tariff petition for FY 2014-15.

35.4 Securities and Exchange Commission of Pakistan vide S.R.O. No. 24 of 2012 had granted waiver to the Company, with immediate effect, from the application of (IFRIC-4) "Determining whether an arrangement contains a lease" subject to certain disclosure requirements. However, no such disclosure has been made in the financial statements. Currently NTDC is dealing with number of IPPs which make this exercise very complicated, secondly NTDC is not listed, hence this office has requested the SECP for exemption from this disclosure (additional information) in annual accounts.

35.5 The Company issued 5,269,988,100 ordinary shares of Rs 10/- each in the name of President of Pakistan against cash and other considerations amounting to Rs. 22 billion and Rs. 30 billion respectively. However, the requirements of "The Companies Issue of Capital Rules 1996" have not been complied with in respect of issuance of shares for consideration other than in cash, as shares have been issued against such properties which have not been valued by professional valuers and whose title are still not in the name of

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the Company. Further, the exemption order from the Securities and Exchange Commission of Pakistan with respect to the requirements of "The Companies Issue of Capital Rules 1996" had not been made available to us. It is apprised that Water & Power Development Authority (WAPDA) has taken up the matter with Ministry of Water & Power vide letter No. MF(HQ)/P/GMF(P) 1672-76 dated 24-4-2012 with the request to confirm the accounting treatment to be made in the books of accounts of Wapda for issuance of ordinary shares to the President of Pakistan. The proposed accounting treatment would be made in the Books of Account of Wapda Power Wing on receipt of requisite confirmation from Ministry of Water & Power. Furthermore, the matter was also taken up with SECP to get confirmation for the compliance of the Rules and response is awaited from their end.

35.6 The NTDC's response on the matter has been critically evaluated in light of the audited and draft accounts for the FY 2012-13 and FY 2013-14. Tariff Department considers that NTDC's financial viability is important for NEPRA since the Company is licensee of NEPRA and only Transmission Company providing services to all Distribution Companies including K-Electric. The current circular debt situation is alarming because the end-consumer is affected due to the recovery of the revenue requirement issues. The qualifications of the auditors require NTDC management attention since this is directly related with the financial viability of the Company. Although GOP is the owner of the NTDC however keeping in view the legal status of the Company, NEPRA considers that the receivables should be recovered in a manner that do not affect the Company's financial viability. In view thereof NTDC management is directed to raise these issues with the quarter concerned i.e. Ministry of Water & Power and pursue with respect to the recovery of the receivables on priority basis.

36. <u>Issue # 19 Whether the concerns of the intervener and commentator are justified?</u>

36.1 The NTDC did not submit any response of the intervener's comments. The Authority takes serious notice of the non-reply of the petitioner against the concerns raised by the intervener and directs that the petitioner should have responded and in future such act of the petitioner would invite penal action under the relevant rules. However the Authority has considered and addressed the same as under:

- Central Power Purchasing Agency (CPPA) was created / established under the provisions of Article 8 of NTDC license (No. TL/01/2002) and clause 62 & 63 of NEPRA Tariff determination for NTDC 2004 on 26 Jul 2004 with a mandate to procure Electric Power on behalf of XWDISCOs to meet their demand.

- NTDC is transmission company and have only given mandate to provide transmission and transformation services. NEPRA ensures that the Petitioner complies its Performance Standards (Transmission) Rules 2005 and Grid Code accordingly.

- On the concern of paying Rs. 21.8 billion to the RPPs in mobilization advance with bank loans taken against assets of the National Transmission and Dispatch Company (NTDC), the intervener could not substantiate its concern with any

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evidence. It is pertinent to mention here that there was no such transaction recorded in the books of the accounts either or qualified by the external auditor in their report of FY 2012-13, therefore the Authority is recommended to decline the concern of the intervener.

- On the point of NTDC's receivables of Rs. 31 billion from K-ELECTRIC till 2008, the matter has been discussed in detail at Para # 25.4 above.

- Same as discussed at Para # 25.4 above.

36.2 Based on the assessment in the preceding paragraphs, the revenue requirement for FY 2014-15 is estimated as follows:

Revenue Requirement

	Rs. Million
GE&A (including CPPA)	4,937
Repair & Maintenance	730
Insurance	119
Depreciation	4,327
Financial Charges	848
Return on Equity	9,375
Prior Year Adjustment (PYA) for FY 2012-13	3,610
	23,946
Less: Other Income	(1,320)

Total Revenue Requirement **22,626**

37. ORDER

37.1 The National Transmission and Dispatch Company (NTDC) is allowed to charge such tariff and on such terms and conditions as provided hereunder:

<u>Use of System Charges</u>

NTDC shall charge its users for provision of transmission and allied services the following two-part tariff i.e. a fixed and variable charge:

Fixed charge (USCF)	=	**Rs. 113.05/kW/month**
Variable charge (USCV)	=	**Rs. 0.2263 per kWh X LAL factor.**

Where:

LAL Factor is a factor for Adjustment of Losses and Load imposed on the transmission system by a user. LAL Factor of unity will be applied till benchmarks are defined by NEPRA.

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The variable charge shall be applicable to the energy in kilowatt-hours (kWh) recorded during a billing period. Recording of the maximum demand in kW and energy delivered in kWh shall be carried out at meters installed at the delivery metering points i.e. inter-connection point between:

a) NTDC transmission system (NTDC System) and the bulk power consumer.
(b) NTDC system and the transmission system of a special purpose transmission licensee.
(c) NTDC system and the transmission system of another country connected under an arrangement approved by the Federal Government.
(d) NTDC system and a distribution company receiving power in bulk either for sale to its own consumers or on behalf of another distribution company or a BPC located in another distribution company.

37.2 Transfer Price or Transfer Charge to XWDISCOS

37.2.1 NTDC shall charge the DISCOS, a transfer charge for procuring power from approved generating companies and its delivery to DISCOs for a billing period as under:

TP = CTP + UOSC + ETC

Where:

TP	=	Transfer Price to DISCOs/K-ELECTRIC
CTP	=	Capacity Transfer Price to DISCOs/K-ELECTRIC in Rs./kW/Month
UOSC	=	Use of System Charge to DISCOs/ K-ELECTRIC in Rs./kW/ Month
ETP	=	Energy Transfer Price to DISCOs/K-ELECTRIC in Rs./kWh

$$CTC = \frac{GenC}{PD(sys)}$$

$$UOSC = \frac{USCF}{PD(sys)}$$

Where:

GenC	=	Summation of the Capacity Cost pertaining to generation in Rupees for a billing period minus the amount of liquidated damages received during that billing period.
USCF	=	NTDC transmission charge in Rupees for a billing period.

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PD(sys) = Peak Demand of the System recorded during a billing period in kW.

Note : To calculate the CTC and UOSC in Rupees for each DISCOs/ K-ELECTRIC for a billing period, the rate of CTC and UOSC will be further multiplied by the particular DISCO/ K-ELECTRIC's demand recorded at the time of system peak in kW.

$$ETC = \frac{GenE}{EUs}$$

Where:

GenE = Total Energy charge in Rupees during a billing period.
EUs = Energy units (kWh) recorded at the Common Delivery Metering Points of all the DISCOs/K-ELECTRIC during a billing period.

37.2.2 NTDC shall, for the purpose of clarity intimate to all DISCOs/K-ELECTRIC the generation part of the Transfer Charge during a billing period by deducting from the Transfer Charge the Transmission Charge or Use of System Charges.

37.2.3 The following generation entities and extraneous sources of import of electricity stand approved who would be providing electric power to CPPA within NTDC for onward delivery to the DISCOs/K-ELECTRIC:

i) All Hydroelectric Generating Stations owned and operated by WAPDA.

(ii) Chashma Nuclear Power Generating Station.

(iii) All IPPs selling power to WAPDA under a long-term contract for which sovereign guarantees have been provided by the Federal Government.

(iv) The thermal generation companies formed out of unbundling of WAPDA for a period upto 01.07.2009 or till the Competitive Market Operation Date determined by the Authority (whichever is later).

(v) Other generation entities (in the public sector, private sector or under public-private partnership, initiated, sponsored or developed by the Federal Government or any Provincial Government) approved by NEPRA to provide power to NTDC for onward delivery to the DISCOs/K-ELECTRIC for a specific period.

vi) Sources of electricity imported from another country or the territory of Azad Jammu and Kashmir under an approval of the Federal Government for provision of power to meet the demand of any or all of the DISCOs/K-ELECTRIC as approved by NEPRA.

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(vii) Electricity purchased by NTDC from any generation company within Pakistan through Power Purchase Agreement pursuant to NEPRA Interim Power Procurement Regulations, 2005.

38 Terms and Conditions:

38.1 <u>Definitions:</u>

1. Bulk Power Consumer (BPC) means a Bulk Power Consumer as defined in NEPRA Act.
2. Billing Period means a period determined by NEPRA for the purpose of charging the transfer charge to DISCOs in respect of power delivered. The billing period for the purpose of applying a transfer charge shall be on a one month basis (starting 24:00 hrs of the 1st day of the month and ending 12:00 hrs on the last day of the month) till a shorter billing period is specified by NEPRA through a Competitive Trading Arrangement Transitional Order.
3. Competitive Market Operation Date = The date as defined under article 7(2) of the License granted to NTDC.
4. CPPA = Central Power Purchase Agency as required under Article 8(a) of the License granted to NTDC.
5. Delivery metering point means the interconnection point at the grid stations where power is delivered by NTDC to DISCOs, BPCs connected directly to the transmission system or other users of the transmission system and where relevant meters are installed to measure such power delivered.
6. IPPs = Independent Power Producers established under the Federal Government's Power Policy of 1994 or earlier (listed as Annexure-III).
7. System Peak Demand = The highest system peak demand recorded during a billing period measured over successive periods of 30 minute interval at the receiving metering point of the DISCOs or user of the transmission system. Maximum demand measuring apparatus used for recording the maximum system peak demand during a billing period shall be based on a 30 minutes interval reset basis.
8. Month means a calendar month according to the Gregorian Calendar.
9. Power Factor: the rate expressed as a percentage of the kilowatt hours to the kilovolt hours consumed during a billing period.
10. Use of System Charge means any charge (fixed or variable) payable by a Distribution Company, BPC or any other user of the transmission system for Transportation of Power from Generator to Delivery Metering Point and delivery to a distribution company, BPC or any other user and as required under Article 13 and 14 of the NTDC License.

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39. <u>Other Terms and Conditions</u>

- Power Factor Penalty: The DISCOs shall maintain an average power factor during a billing period at the delivery metering point of at least 85% lagging. In the event of the said Power Factor falling below 85% in a billing period the concerned DISCO shall pay to NTDC a penalty as determined by the Authority for general applicability on the recommendation of NTDC and after consultation with the generation and distribution licensees.
- In order to ensure least cost generation, NTDC shall strictly follow the merit order while operating the power plants.

40. <u>Directions of the Authority</u>

40.1 The directions of the Authority in the proceedings of the instant petition have been reproduced as under:-

- To develop the mechanism in consultation with the K-Electric for supply of electricity in co-ordination with Ministry of Water & Power and submit the report for Authority's consideration.
- To take necessary measures for improving recovery situation and take up this issue with the GOP in order to resolve the matter.
- To evacuate renewable energy on priority basis from the power projects which are achieving COD in coming months in line with the Power Policy of the GOP.
- To submit the status of NOC issued to renewable projects within one month of issuance of this determination
- To provide the detailed power evacuation plan for the upcoming renewable power projects within one month of issuance of this determination.
- To provide copy of agreement with K-Electric when it is finalized.
- To take necessary measures for improving recovery situation and take up this issue with the GOP in order to resolve the matter.
- To file the next tariff petition of FY 2015-16 on the basis of calculation of MDI on co-incidental basis.
- To submit report regarding 500 kV HVDC Transmission Line for dispersal of 1000 MW power from Tanavir Iran within one month of issuance of this determination.
- To carry out detailed inquiry of the tripping and submit the detailed reports along with the plan to cater for such incidents in future.

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National Transmission and Despatch Company
Calculation of Capital Base and Reasonable Return

Annex-I

(Rs.Mln)

		Description	Determined 2012-13	Actual 2012-13	Provisional 2013-14	Projected 2014-15	Assessed 2014-15
A		**Fixed Assets**					
	a)	Original Cost of Fixed Assets in Opertaions	128,352	109,470	118,210	143,933	118,210
		Less: Consumers' Capital Contribution	(55)	(55)	(5,219)	(49)	(5,219)
		Accumulated Depreciation	(47,970)	(47,741)	(52,031)	(56,358)	(52,031)
		Assets writen/ Disposed off					
	b)	Capital Work in Prgress	51,291	56,850	59,735	85,261	59,735
		Net Operating Fixed Assets	**131,618**	**118,525**	**120,695**	**172,787**	**120,695**
		Total A	**131,618**	**118,525**	**120,695**	**172,787**	**120,695**
B		**Current Assets**					
	a)	Stores & Spares (3% of the gross fixed assets in operation)	3,851	3,284	3,546	4,318	3,546
	b)	Accounts Receiveables (equal to 30 no. of days outstanding of annual billing)	1,737	1,379	1,630	3,014	1,630
	c)	Cash & Bank Balance (1/12th of sum of cash and bank balance whether deposits at the end of each month of the year subject to the maximum of 1/6th of annual operating expenses other than non-cash items)	1,436	1,436	1,593	215	1,593
		Total B	**7,024**	**6,100**	**6,770**	**7,547**	**6,770**
C		**Total A+B**	**138,642**	**124,624**	**127,465**	**180,334**	**127,465**
D		**Less:**					
	b)	Foreign Loan - Direct	-				
	c)	Foreign Loan - Relent	48,021	37,604	35,179	45,428	35,179
	d)	Federal Government Loan	1,424				
	e)	Borrowing from Government's approved Organizations/ institutions	5,307	-	-	-	-
	f)	Relent loan from GOP		-	-	-	-
		Local Loans					
	g)	Security Deposits by the consumers	62				
	h)	Employees Retirement Benefits	7,691	15,609	16,263	10,702	16,263
	i)	Dividends payable at the beginning of accounting year					
	j)	Creditors, accrued and other current liabilities (2/3rd of current assets)	4,683	4,066	4,513	5,031	4,513
		Total D	**67,187**	**57,279**	**55,955**	**61,161**	**55,955**
E		**Capital Base (C-D)**	**71,455**	**67,345**	**71,510**	**119,173**	**71,510**
F		Reasonable return on Capital Base %	**13.11%**	**13.11%**	**13.11%**	**13.11%**	**13.11%**
		Reasonable return on Capital Base (E*F)	**9,368**	**8,829**	**9,375**	**15,624**	**9,375**

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National Transmission and Despatch Company
ESTIMATION OF TRANSMISSION COSTS

Annex-II

Rs (Mln)

	Description	Determined 2012-13	Actual 2012-13	Provisional 2013-14	Assessed 2014-15
1	**Transmission Costs:-**				
a	General Establishment and Admin (Include CPPA)	4,825	4,830	5,651	4,937
b	Repair & Maintenance	595	456	571	730
c	Insurance	112	92	108	119
d	Depreciation	4,083	3,428	4,029	4,327
	Total Transmission Costs	**9,615**	**8,806**	**10,359**	**10,113**
2	**Financial Charges**	-			-
a	Foreign Direct Loan		-		
b	Foreign Relent Loan	5,902	3,755	4,885	4,885
c	Central Govt. Loan	237	546	385	385
d	Wapda Bonds	-	-		
e	Local Currency Loan	726		-	-
f	Others	-	4	-	-
	Total Financial Charges	**6,866**	**4,305**	**5,270**	**5,270**
	Allocated to Work in Progress	(3,137)	- (3,556)	(4,422)	(4,422)
	Net Financial Charges	**3,729**	**749**	**848**	**848**
3	**Total Costs (1+2)**	13,343	9,555	11,207	10,961
4	Other Income	(1,536)	(1,040)	(949)	(1,320)
5	**Net Costs (3-4)**	**11,807**	**8,515**	**10,258**	**9,641**

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Annex-III

List of independent Power Producers (IPPs)

1. AES Lal Pir (Pvt.) Ltd
2. AES PakGen (Pvt.) Limited
3. Altern Energy Limited
4. Davis Energen private Limited
5. Fauji Kabirwala Power Company Limited
6. Gul Ahmed Energy Limited
7. Habibullah Coastal Power (Pvt.) Co.
8. Japan Power Limited
9. Kohinoor Energy Limited
10. TNB Liberty Power Ltd
11. Rousch (Pakistan) Power Limited
12. Saba Power Company Limited
13. Southern Electric Power Company Limited
14. Tapal Energy Private Limited
15. Uch Power Limited

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