

S2 No. 40/2020



TELANGANA STATE POWER GENERATION CORPORATION LIMITED
(A Govt. Of Telangana Undertaking)

O.P. No. 5 OF 2021

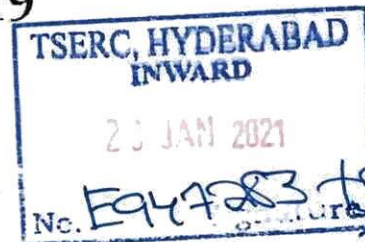
True up filings

Of

TSGENCO

For the 3rd control period

F.Y. 2014-2019



Volume 2 of 2

7 of 7

BEFORE THE
TELANGANA STATE ELECTRICITY REGULATORY COMMISSION
AT HYDERABAD.

O.P.26 of 2016

In the matter of:

Application for Truing up the **Generation tariff** for the existing stations in accordance with the clause 3.8 of TSERC Regulations 1 of 2019 and Determination of capital cost & tariff in respect of KTPS Stage VII for the 3rd control period (2014-19) under Section 62 of the Electricity Act'2003.

Telangana State Power Generation Corporation Limited,

Applicant

And

Southern Power Distribution Company of Telangana Ltd., & 4Others

Respondents.

**VOLUME-2
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ANNEXURE -A8
Summary Sheet

FORM-1

Name of the Company

TSGENCO

Name of the Power Station :


KTPS ABC (720MW)

		(Rs in Crs)				
S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	64.17	64.17	64.17	64.17	64.17
1.2	Return on Capital Employed ¹	117.25	109.54	107.60	97.75	85.11
1.3	O & M Expenses	372.90	396.32	421.29	415.53	488.97
	Total	554.32	570.03	593.06	577.45	638.25

2.Calculation of Rate of Energy Charge(Rs./kWh)¹

2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	2.55	2.47	2.64	2.86	3.11
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.12	0.1	0.08	0.08	0.09
2.3	Rate of Energy Charge ex-bus(REC) ^{3A,3B,3C}	2.67	2.57	2.72	2.94	3.20

* KTPS O&M unit-3 (60MW), Unit-6(120MW) & Unit -8 (120MW) have phased out from 20.05.2017 @5:23Hrs, 03.01.2019 @19:52Hrs & 14.02.2019 @12:00 Hrs respectively.


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

Plant Characteristics

Name of the Company : TSGENCO

Name of the Power Station Kothagudem Thermal Power Station (KTPS ABC (720MW))

Basic characteristics of the plant¹ Coal based thermal Station (4X60&4X120MW) with conventional Boiler and Steam Turbine

Special Features of the Plant

Unit 1 to 4 are non Reheat type Units of Japanese design. Boiler is of IHI/Japan design and Turbine and Generator are by Hitachi/Japan. Units 5 to 8 were initially of 110MW and were renovated and uprated to 120MW.

Site Specific Features²

A non pit head station

Environmental Regulation related features⁴

ESPs are provided for pollution control in all the Units. Opacity meters are provided for SPM measurement

Any other special features

Fuel Details ⁵	Primary Fuel		Secondary Fuel			Alternate Fuels		
	Coal		Heavy Oil/Light Diesel Oil					
	Module number or Unit number							
Unit.No.	1	2	3	4	5	6	7	8
	Unit-1	Unit-2	Unit-3	Unit-4	Unit-5	Unit-6	Unit-7	Unit-8
Installed Capacity (IC)	60MW	60MW	60MW	60MW	120MW	120MW	120MW	120MW
Date of Commercial Operation (COD)	4/7/1966	27-11-1966	27-5-1967	8/7/1967	13-08-1974	19-12-1974	10/3/1977	10/1/1978
Type of cooling system ⁶	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers
Type of Boiler Feed Pump ⁷	Turbine driven	Turbine driven	Turbine driven	Turbine driven	Motor driven	Motor driven	Motor driven	Motor driven

J. Jayaram
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM-3

Normative parameters considered for tariff computations


Name of the Company TSGENCO

Name of the Power Station KTPS O&M

Particulars	Unit	Year ending March					As per TSERC /APREC norms 1 of 2008 Regulations
		As per True up filings					
		2014-15	2015-16	2016-17	2017-18	2018-19	
1	2	3	4	5	6	7	8
Rate of Return on Capital Employed	%	13.40%	12.82%	12.40%	12.40%	11.62%	Not mentioned
Target Availability	%	77%	77%	77%	77%	77%	77%
Target PLF	%	77%	77%	77%	77%	77%	Not mentioned
Auxiliary Energy Consumption	%	9.7	9.7	9.7	9.7	9.7	9.7
Gross Station Heat Rate	kCal/kWh	2833	2833	2833	2833	2833	2833
Specific Fuel Oil Consumption	ml/kWh	2	2	2	2	2	2
O&M Cost *	Rs.Lakhi/MW	As per GTO	As per GTO	As per GTO	As per GTO	As per GTO	5 Years average
Cost of Coal/Lignite for WC ¹	in Months	1	1	1	1	1	1
Cost of Secondary Fuel Oil for WC ¹	in Months	1	1	1	1	1	1
Fuel Cost for WC ²	in Months	1	1	1	1	1	1
Liquid Fuel Stock for WC ²	in Months						
O & M Expenses for WC	in Months	1	1	1	1	1	1
Maintenance Spares for WC	%	1	1	1	1	1	1
Receivables for WC	* KTPS O&M unit-3	2	2	2	2	2	2
Prime lending Rate of SBI as on _____	%	14.75	14.75	14.05	14	13.45	13.8
Incentive Rate	Paise / kWh	25	25	25	25	25	25

* Payrevision commitment of 40% on salaries and allowances is extra from 1.4.2018

* GTO : Generation Tariff Order dated:05.06.2017 issued by Hon'ble TSERC


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company

Name of the Power Station KTPS ABC

(Amount in lacs)

Particulars	Package 1
1	2
Source of Loan ¹	PFC
Currency ²	Indian Rupee
Amount of Loan sanctioned	19327
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	19302
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	12.50%
Margin, if Floating Interest ⁸	Yes
Are there any Caps/Floor ⁹	
If above is yes, specify caps/floor	
Moratorium Period ¹⁰	
Moratorium effective from	
Repayment Period ¹¹	12 Years
Repayment effective from	
Repayment Frequency ¹²	
Repayment Instalment ^{13,14}	48
Base Exchange Rate ¹⁶	

J. V. S.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 11

Statement of Depreciation

Name of the Company TSGENCO

Name of the Power Station KTPS ABC

Rs in Crs

Financial Year	2014-15	2015-16	2016-17	2017-18	2018-19
1	3	4	5	6	7
Depreciation on Capital Cost	1187.67	1235.80	1287.64	1200.63	1112.87
Depreciation recovered during the Year	64.17	64.17	64.17	64.17	64.17
Depreciation & Advance against					
Depreciation recovered during the year	64.17	64.17	64.17	64.17	64.17
Cumulative Depreciation & Advance against Depreciation recovered upto the year	868.37	932.54	924.86	912.47	976.6392


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS (ABC)

Rs in Cr

Sl. No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	(Amount in Cr)	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	6.30	0.00	0.00	6.30	0.00	0.00	6.30	0.00	0.00	6.30	0.00	0.00	6.30	0.00	0.00
2	BUILDINGS	3.02%	19.82	0.00	0.11	19.82	0.00	0.11	19.82	0.00	0.11	19.82	0.10	0.11	19.92	3.12	0.16
3	PLANT AND MACHINERY	7.84%	1,016.55	48.15	48.65	1,064.70	36.56	36.57	1,101.26	6.26	24.27	1,107.51	3.84	24.44	1,111.35	18.73	21.14
4	HYDRAULIC WORKS	7.84%	20.81	0.00	0.22	20.81	0.00	0.06	20.81	0.00	0.00	20.81	0.00	0.00	20.81	0.00	0.00
5	OTHER CIVIL WORKS	3.02%	26.28	0.29	1.34	26.57	0.00	1.34	26.57	0.00	1.16	26.57	0.00	1.14	26.57	0.00	1.07
6	FURNITURE AND FIXTURES	12.77%	1.36	0.00	0.04	1.37	0.03	0.04	1.40	0.15	0.05	1.55	-0.01	0.09	1.54	0.08	0.05
7	VEHICLES	33.40%	0.10	3.35	0.95	3.45	1.80	1.18	5.25	0.00	1.57	5.25	0.02	0.60	5.27	0.00	0.37
8	COMPUTERS	33.40%	1.74	0.60	0.20	2.34	0.07	0.24	2.41	0.49	0.28	2.91	0.38	0.39	3.28	0.05	0.31
9	CAPITAL SPARES	7.84%	49.56	0.00	3.04	49.56	13.49	2.71	63.06	0.00	2.75	63.06	1.55	2.75	64.61	0.00	2.88
10	OFFICE EQUIPMENT	12.77%	0.03	0.02	0.01	0.05	0.07	0.02	0.12	0.19	0.07	0.31	0.76	0.10	1.07	0.34	0.30
11	AP RE-ORG ACT-2014 A/C		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	APPLICATION SOFTWARE	33.40%	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00
			1,142.57	52.41	54.54	1,194.98	52.02	42.27	1,247.00	7.10	30.25	1,254.10	6.64	29.52	1,260.74	22.32	26.27

Jung
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company : Telangana State Power Generation Corporation Ltd

Name of the Power Station : Kothagudem Thermal Power Station (KTPS Complex)

(Amount in lacs)

Sl. no.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7	8
	Loan	19,327.00					
	Gross loan - Opening	6,997.55	19,327.00	19,327.00	19,327.00	19,327.00	19,327.00
	Cumulative repayments of Loans upto previous year		12,329.45	13,932.25	15,200.22	16,518.91	17,099.89
	Net loan - Opening		6,997.55	5,394.75	4,126.78	2,808.09	2,227.11
	Add: Drawal(s) during the Year		-	-	-	-	-
	Less: Repayment (s) of Loans during the year		1,602.80	1,267.97	1,318.69	580.98	580.98
	Net loan - Closing		5,394.75	4,126.78	2,808.09	2,227.11	1,646.13
	Average Net Loan		6,196.15	4,760.77	3,467.44	2,517.60	1,936.62
	Rate of Interest on Loan		12.50%	12.50%	12.50%	12.50%	12.50%
	Interest on loan		690.87	555.53	383.87	250.42	192.63

J. V. V.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

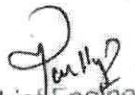
Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station KTPS ABC

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.40%	12.82%	12.40%	12.40%	11.62%
WACC ¹	874.99	854.49	867.82	788.39	732.75
RoCE	117.25	109.54	107.60	97.75	85.11


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

PART-I

FORM- 14

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

KTPS (ABC)

(Amount in Crs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	Cost of Fuel	108.06	104.30	110.08	110.41	110.87
2	O & M expenses	31.08	33.03	35.11	34.63	40.75
3	Maintenance Spares	43.89	46.14	48.53	50.53	52.61
4	Recievables	308.50	303.60	319.01	317.06	328.11
	Total Working Capital	491.52	487.06	512.72	512.63	532.35


Chief Engineer
Coal & Commercial
TSGENCO. V.S., Hyderabad-82

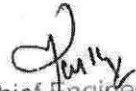
PART-I
FORM-18

Details/Information to be Submitted in respect of Fuel for Computation of Energy Charges

Name of the Company
Name of the Power Station

TSGENCO
KTPS ABC

Sl. No.	Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	230750	204141	194170
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1846	1633.128	1553.36
14	Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
	weighted average price	Rs/MT	2832	2723.7	2638.33
15	* KTPS O&M unit-3 (60MW), Unit-6(120MW) & Unit -8	(kCal/Kg)	2966	2918	2955


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE -A9

FORM-1

Summary Sheet

Name of the Company


TSGENCO

Name of the Power Station :

KTPS Stage-V(2X250MW)

S.No.	Particulars	(Rs in Crs)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	12.63	11.31	10.25	10.23	8.81
1.2	Return on Capital Employed ¹	104.60	104.50	104.95	94.12	96.25
1.3	O & M Expenses	143.40	152.40	162.00	172.20	219.67
	Total	260.63	268.21	277.20	276.55	324.73

2.1	Rate of Energy Charge from Primary Fuel (REC) ²	2.09	2.14	2.27	2.59	2.74
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.1	0.07	0.05	0.07	0.08
2.3	Rate of Energy Charge ex-bus(REC)	2.19	2.21	2.32	2.66	2.82


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

**PART-I
FORM-2**

Plant Characteristics

Name of the Company TSGENCO

Name of the Power Station Kothagudem Thermal Power Station/V Stage(Units 9&10)

Basic characteristics of the plant¹ Coal based thermal plant with conventional Boiler and Steam Turbine.

Site Specific Features² A non pit head station

Special Technological Features³ Variable frequency drives for Boiler Feed Pumps are provided.

Environmental Regulation related features⁴ : ESPs are provided for pollution control in both the Units. Opacity meters are provided for SPM measurement

Any other special features

Fuel Details⁵	Primary Fuel	Secondary Fuel	Alternate Fuels
	Coal	Heavy Oil/ Light Diesel Oil	
Details	Module number or Unit number		
Unit .No.	1	2	
	Unit-9	Unit-10	
Installed Capacity (IC)	250MW	250MW	
Date of Commercial Operation (COD)	27-03-1997	28-02-1998	
Type of cooling system ⁶	Closed cycle cooling system with ND cooling towers	Closed cycle cooling system with ND cooling towers	
Type of Boiler Feed Pump ⁷	Motor driven	Motor driven	

[Signature]
 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

PART-I
FORM-3

Normative parameters considered for tariff computations

Name of the Company TSGENCO
Name of the Power Station KTPSV

Particulars	Unit	Year Ending March				As per APERC norms
		2014-15	2015-16	2016-17	2017-18	
Rate of Return on Capital Employed	%	13-40%	13-40%	13-40%	11.62%	2018-19
Target Availability	%	80%	80%	80%	80%	80%
Target PLF	%	80%	80%	80%	80%	80%
Auxiliary Energy Consumption	%	9	9	9	9	9
Gross Station Heat Rate	kCal/kWh	2500	2500	2500	2500	2500
Specific Fuel Oil Consumption	ml/kWh	2	2	2	2	2
O&M Cost *	Rs.Lakhs/MW	As per GTO	As per GTO	As per GTO	As per GTO	As per GTO
Cost of Coal/Lignite for WC ¹	in Months	1	1	1	1	1
Cost of Secondary Fuel Oil for WC ¹	in Months	1	1	1	1	1
Fuel Cost for WC ²	in Months					
Liquid Fuel Stock for WC ²	in Months					
O & M Expenses for WC	in Months	1	1	1	1	1
Maintenance Spares for WC	%	1	1	1	1	1
Receivables for WC	in Months	2	2	2	2	2
Prime lending Rate of SBI as on _____	%	14.75	14.75	14.05	14	13.45
Incentive Rate	Paise / kWh	25	25	25	25	25

* Pro-ration commitment of 40% on salaries and allowances is extra from 1.4.2018

* GTO - Generation Tariff Order dated 05.06.2017 issued by Hon'ble TSERC

J. Jayaram
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

KTPS V

(Amount in lacs)

Particulars 1	Package1 2
Source of Loan ¹	PFC
Currency ²	Indian Rupee
Amount of Loan sanctioned	4,140.00
Amount of Gross Loan drawn upto 31.03.2014/COD <small>3,4,5,13,15</small>	3,600.00
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	
Margin, if Floating Interest ⁸	Yes
Are there any Caps/Floor ⁹	
If above is yes,specify caps/floor	
Moratorium Period ¹⁰	1 Year
Moratorium effective from	
Repayment Period ¹¹	12 Years
Repayment effective from	
Repayment Frequency ¹²	Quarterly
Repayment Instalment ^{13,14}	48
Base Exchange Rate ¹⁶	

P. S. S.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

KTPS-V

Rs in Crs

Financial Year	2014-15	2015-16	2016-17	2017-18	2018-19
1	3	4	5	6	7
Depreciation on Capital Cost	2121.30	2127.51	2129.31	2134.64	2135.66
Depreciation recovered during the Year	12.63	11.31	10.25	10.23	8.81
Depreciation & Advance against Depreciation recovered during the year	12.63	11.31	10.25	10.23	8.81
Cumulative Depreciation & Advance against Depreciation recovered upto the year	1634.36	1645.67	1655.92	1666.15	1674.96

July
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS V

Rs in Cr

Sl. No.	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule.	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	3.52	0.00	0.00	3.52	0.00	0.00	3.52	0.00	0.00		0.00	0.00	3.52	0.00	0.00
2	BUILDINGS	3.02%	92.35	0.00	0.32	92.35	0.00	0.00	92.35	0.00	0.00	92.35	0.00	0.00	92.35	0.00	0.00
3	PLANT AND MACHINERY	7.84%	1,812.48	0.00	2.41	1,812.48	0.00	0.42	1,812.48	0.08	0.41	1,812.56	-0.17	0.40	1,812.40	0.00	0.02
4	HYDRAULIC WORKS	7.84%	195.84	0.00	3.38	195.84	0.00	3.38	195.84	0.00	3.38	195.84	0.00	3.38	195.84	0.00	3.38
5	OTHER CIVIL WORKS	3.02%	46.28	12.43	1.84	58.71	0.19	2.65	58.90	0.00	2.66	58.90	0.00	2.66	58.90	19.54	4.19
6	FURNITURE AND FIXTURES	12.77%	0.76	0.00	0.02	0.76	0.00	0.02	0.77	0.05	0.02	0.81	0.03	0.03	0.85	0.01	0.03
7	VEHICLES	33.40%	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.17	0.00
8	COMPUTERS	33.40%	1.49	0.29	0.19	1.78	0.01	0.14	1.78	0.41	0.14	2.20	0.26	0.18	2.45	0.17	0.25
9	CAPITAL SPARES	7.84%	39.09	0.00	3.06	39.09	1.81	2.91	40.90	5.24	1.67	46.14	0.90	2.09	47.04	3.86	1.04
10	OFFICE EQUIPMENT	12.77%	0.00	0.00	0.00	0.00	0.07	0.00	0.07	0.07	0.03	0.15	0.40	0.05	0.54	0.23	0.06
11	AP RE-ORG ACT-2014 A/C		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	APPLICATION SOFTWARE	33.40%	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00
			2,191.87	12.72	11.23	2,204.59	2.07	9.53	2,206.66	5.86	8.31	2,212.52	1.42	8.79	2,213.94	23.98	8.98

July
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Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company : Telangana State Power Generation Corporation Ltd

Name of the Power Station : Kothagudem Thermal Power Station Stage V

(Amount in lacs)

Sl. no.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7	8
	Loan	4,140.00					
	Gross loan - Opening	795.35	4,140.00	4,140.00	4,140.00	4,140.00	
	Cumulative repayments of Loans upto previous year		3,344.65	3,704.75	3,878.85	4,074.71	
	Net loan - Opening		795.35	435.25	261.15	65.29	
	Add: Drawal(s) during the Year		-	-	-		
	Less: Repayment (s) of Loans during the year		360.10	174.10	195.86	65.29	
	Net loan - Closing		435.25	261.15	65.29	-	
	Average Net Loan		615.30	348.20	163.22	32.65	-
	Rate of Interest on Loan		12.50%	12.50%	12.50%	12.50%	12.50%
	Interest on loan		66.98	39.49	17.69	1.06	

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Chief Engineer
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**PART-I
FORM- 13A**

Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station KTPS-V

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.40%	13.40%	13.40%	11.62%	11.62%
WACC ¹	780.58	779.88	783.20	810.32	828.65
RoCE	104.60	104.50	104.95	94.12	96.25

[Signature]
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**PART-I
FORM- 14**

Working Capital

Name of the Company TSGENCO
Name of the Power Station KTPS-V

(Amount in Crs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	Cost of Fuel	63.95	64.71	67.74	77.67	82.34
2	O & M expenses	11.95	12.70	13.50	14.35	18.31
3	Maintenance Spares	33.78	35.20	36.62	38.14	39.68
4	Receivables	171.33	174.12	181.69	201.44	218.81
	Total Working Capital	281.01	286.73	299.56	331.60	359.14

[Signature]
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Coal & Commercial
TSGENCO, V.S., Hyderabad-82

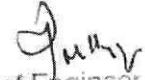
PART-I
FORM-18

Details/Information to be Submitted in respect of Fuel for Computation of Energy Charges¹

Name of the Company TSGENCO

Name of the Power Station KTPS-V

Sl. No.	Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	166760	181860	274900
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1334.08	1454.88	2199.2
14	Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
	weighted average Price	Rs/MT	2898.47	2817.83	2769.41
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	2891	2974	2997


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE -A10
Summary Sheet

FORM- 1

Name of the Company

TSGENCO

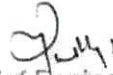
Name of the Power Station :

KTPS VI 1X500MW

		(Rs in Crs)				
S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	181.69	181.69	181.69	181.69	181.69
1.2	Return on Capital Employed ¹	313.40	283.89	252.13	226.71	209.14
1.3	O & M Expenses	96.00	102.06	108.48	115.32	147.10
	Total	591.09	567.64	542.30	523.72	537.93

2. Calculation of Rate of Energy Charge (Rs./kWh)¹

2.1	Rate of Energy Charge from Primary Fuel (REC) ²	3.28	2.80	2.89	2.98	3.06
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.11	0.09	0.04	0.06	0.07
2.3	Rate of Energy Charge ex-bus(REC)	3.39	2.89	2.93	3.04	3.13


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

**PART-I
FORM-2**

Plant Characteristics

Name of the Company TSGENCO

Name of the Power Station Kothagudem Thermal Power Station Stage-VI (1X500MW(Unit11))

Basic characteristics of the plant¹ Coal based thermal plant with conventional Boiler and Steam Turbine.

Site Specific Features² A non pit head station

Special Technological Features³ Variable frequency drives for Boiler Feed Pumps are provided.

Environmental Regulation related features⁴ : ESPs are provided for pollution control in both the Units. Opacity meters are provided for SPM measurement

Any other special features

Fuel Details⁵	Primary Fuel	Secondary Fuel	Alternate Fuels
	Coal	Heavy Oil/ Light Diesel Oil	
Details	Module number or Unit number		
Unit .No.	1		
	Unit-11		
Installed Capacity (IC)	500MW		
Date of Commercial Operation (COD)	23.10.2011		
	Closed cycle cooling system with ND cooling towers		
Type of cooling system ⁶			
Type of Boiler Feed Pump ⁷	Motor driven		

July
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Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM-3

Normative parameters considered for tariff computations

Name of the Company TSGENCO

Name of the Power Station KTPS-VI

Particulars	Unit	Year Ending March					As per APERC norms
		As per true up filings					
		2014-15	2015-16	2016-17	2017-18	2018-19	
-1		2					3
Rate of Return on Capital Employed	%	13.02%	12.96%	12.55%	11.73%	11.68%	Not mentioned
Target Availability	%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
Target PLF	%	80.00%	80.00%	80.00%	80.00%	80.00%	80.00%
Auxiliary Energy Consumption	%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
Gross Station Heat Rate	kCal/kWh	2450	2450	2450	2450	2450	2450
Specific Fuel Oil Consumption	ml/kWh	2	2	2	2	2	2
O&M Cost *	Rs.Lakh/MW	As per GTO	As per GTO	As per GTO	As per GTO	As per GTO	Avg of five years
Cost of Coal/Lignite for WC ¹	in Months	1	1	1	1	1	1
Cost of Secondary Fuel Oil for WC ¹	in Months	1	1	1	1	1	1
Fuel Cost for WC ²	in Months						
Liquid Fuel Stock for WC ²	in Months						
O & M Expenses for WC	in Months	1	1	1	1	1	1
Maintenance Spares for WC	%	1	1	1	1	1	1
Receivables for WC	in Months	2	2	2	2	2	2
Prime lending Rate of SBI as on _____	%	14.75	14.75	14.05	14	13.45	13.8
Incentive Rate	Paise / kWh	25	25	25	25	25	25

* payrevision commitment of 40% on salaries and allowances is extra from 1.4.2018.

* GTO : Generation Tariff Order dated:05.06.2017 issued by Hon'ble TSERC.

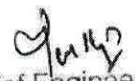
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Details of Project Specific Loans

Name of the Company TELANGANA STATE POWER GENERATION CORPORATION LIMITED
 Name of the Power Station KOTHAGUDEM THERMAL POWER STATION Stage-VI

(Amount in lacs)

Particulars	Package1	Package2	Package3	Package4	Package5
1	2	3	4	5	6
Source of Loan ¹	PFC Ltd.,	KVB	Bank of Baroda	Tamilnad Mercantile Bank Ltd.,	Canara Bank
Currency ²	Inidan Ruppe	Inidan Ruppe	Inidan Ruppe	Inidan Ruppe	Inidan Ruppe
Amount of Loan sanctioned	176200.00	6245.00	30000.00	10000.00	20000.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	176200.00	6245.00	18968.00	9994.00	20000.00
Interest Type ⁶	Floating	Floating	Fixed	Floating	Floating
Fixed Interest Rate, if applicable			11.25%		
Base Rate, if Floating Interest ⁷		Base Rate		Base Rate	Base Rate
Margin, if Floating Interest ⁸	NO	Yes	NO	NO	NO
Are there any Caps/Floor ⁹		Yes			
If above is yes,specify caps/floor		0.25%			1%
Moratorium Period ¹⁰	3 years	1 year	3 years	1 year	27 months
Moratorium effective from	12.12.07	15.06.09	29.06.09	20.11.09	12.11.09
Repayment Period ¹¹	12 years	10 Years	10 years	10 Years	10 Years
Repayment effective from	15.10.10	31.07.10	30.09.12	31.12.10	28.02.12
Repayment Frequency ¹²	Quarterly	Monthly	Quarterly	Monthly	Quarterly
Repayment Instalment ^{13,14}	48	120	40	120	40
Base Exchange Rate ¹⁶	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable


 Chief Engineer
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Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

KTPS-VI

(Rs in Crs)

Financial Year	2014-15	2015-16	2016-17	2017-18	2018-19
1	3	4	5	6	7
Depreciation on Capital Cost	2388.52	2398.31	2398.82	2494.42	2519.93
Depreciation recovered during the Year	181.69	181.69	181.69	181.69	181.69
Depreciation & Advance against Depreciation recovered during the year	181.69	181.69	181.69	181.69	181.69
Cumulative Depreciation & Advance against Depreciation recovered upto the year	590.53	772.22	953.91	1135.6	1317.29

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Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS VI

Rs in Cr

Sl No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	BUILDINGS	3.02%	183.56	0.00	13.92	183.56	0.20	13.92	183.76	0.00	13.92	183.76	-8.21	13.92	175.55	0.00	13.28
2	PLANT AND MACHINERY	7.84%	2,091.53	0.16	164.72	2,091.69	0.03	162.81	2,091.72	89.14	168.02	2,180.86	33.64	171.75	2,214.50	10.51	172.01
3	HYDRAULIC WORKS	7.84%	178.49	0.00	13.70	178.49	0.30	13.70	178.79	0.00	13.73	178.79	0.00	13.73	178.79	0.00	13.73
4	OTHER CIVIL WORKS	3.02%	16.47	0.00	0.91	16.47	14.29	0.91	30.76	0.80	1.17	31.56	0.00	1.36	31.56	0.51	1.36
5	FURNITURE AND FIXTURES	12.77%	0.57	0.00	0.06	0.57	0.00	0.06	0.57	0.00	0.05	0.57	0.00	0.04	0.57	0.00	0.03
6	COMPUTERS	33.40%	0.34	0.01	0.06	0.35	0.07	0.02	0.42	0.03	0.03	0.45	0.01	0.03	0.46	0.01	0.03
7	SPARES	7.84%	0.00	3.42	0.25	3.42	0.52	0.31	3.94	0.00	0.31	3.94	0.00	0.31	3.94	0.00	0.31
8	OFFICE EQUIPMENT	12.77%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.00	0.10	0.00	0.00
9	RE-ORG ACT-2014 A/C		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			2,470.96	3.59	193.61	2,474.56	15.41	191.72	2,489.96	89.97	197.22	2,579.93	25.53	201.14	2,605.46	11.03	200.74

Pulip
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company

TELANGANA STATE POWER GENERATION CORPORATION LIMITED

Name of the Power Station

Kothagudem Thermal Power Station Stage-VI

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	5	6	7	8	9
1	Loan-1 (PFC)	176200.00					
	Gross loan - Opening	126658.99	176200.00	176200.00	176200.00	176200.00	176200.00
	Cumulative repayments of Loans upto previous year		49541.04	64442.07	79343.12	95558.98	110679.17
	Net loan - Opening		126658.96	111757.93	96856.88	80641.02	65520.83
	Add: Drawal(s) during the Year		0.00	0.00	0.00		
	Less: Repayment (s) of Loans during the year		14901.03	14901.05	16215.86	15120.19	15120.19
	Net loan - Closing		111757.93	96856.88	80641.02	65520.83	50400.64
	Average Net Loan		119208.45	104307.41	88748.95	73080.93	57960.74
	Rate of Interest on Loan		12.50%	12.50%	12.50%	10.20%	10.20%
	Interest on loan		14446.76	12653.88	10120.19	7277.12	5757.75
2	Loan (Bank of Baroda)	30000.00					
	Gross loan - Opening	13705.44	18968.00	24923.35	27433.44	29532.35	29998.89
	Cumulative repayments of Loans upto previous year		5262.56	8269.69	11271.08	14272.87	17350.93
	Net loan - Opening		13705.44	16653.66	16162.36	15259.48	12647.96
	Add: Drawal(s) during the Year		5955.35	2510.09	2098.91	466.54	0.00
	Less: Repayment (s) of Loans during the year		3007.13	3001.39	3001.79	3078.06	3002.07
	Net loan - Closing		16653.66	16162.36	15259.48	12647.96	9645.89
	Average Net Loan		15179.55	16408.01	15710.92	13953.72	11146.93
	Rate of Interest on Loan			11.25%	11.25%	10.80%	10.80%
	Interest on loan		1830.11	1894.92	1782.07	1539.13	1242.60

3	Loan (KVB)	6245.00					
	Gross loan - Opening	2931.95	6245.00	6245.00	6245.00	6245.00	6245.00
	Cumulative repayments of Loans upto previous year		3313.05	3936.25	4559.42	5182.60	5806.15
	Net loan - Opening		2931.95	2308.75	1685.58	1062.40	438.85
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		623.20	623.17	623.18	623.55	438.85
	Net loan - Closing		2308.75	1685.58	1062.40	438.85	0.00
	Average Net Loan		2620.35	1997.17	1373.99	750.63	219.42
	Rate of Interest on Loan		11.25%	11.00%	10.55%	9.95%	9.95%
	Interest on loan		296.28	219.63	148.72	77.68	17.13
4	Loan (Tamilnad Mercantile Bank Ltd.,)	10000.00					
	Gross loan - Opening	6655.24	9994.00	9994.00	9994.00	9994.00	9994.00
	Cumulative repayments of Loans upto previous year		3338.76	4339.86	5343.80	6345.02	7349.46
	Net loan - Opening		6655.24	5654.14	4650.20	3648.98	2644.54
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		1001.10	1003.94	1001.22	1004.44	1001.79
	Net loan - Closing		5654.14	4650.20	3648.98	2644.54	1642.75
	Average Net Loan		6154.69	5152.17	4149.59	3146.76	2143.65
	Rate of Interest on Loan		10.75%	10.60%	10.60%	10.25%	9.40%
	Interest on loan		665.13	547.86	433.87	319.55	205.89
5	Loan (Canara Bank)	20000.00					
	Gross loan - Opening	15513.38	20000.00	20000.00	20000.00	20000.00	20000.00
	Cumulative repayments of Loans upto previous year		4486.62	6445.78	8449.96	10454.32	12463.88
	Net loan - Opening		15513.38	13554.22	11550.04	9545.68	7536.12
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		1959.16	2004.18	2004.36	2009.56	2036.50
	Net loan - Closing		13554.22	11550.04	9545.68	7536.12	5499.62
	Average Net Loan		14533.80	12552.13	10547.86	8540.90	6517.87
	Rate of Interest on Loan		11.20%	11.00%	10.65%	10.40%	9.40%
	Interest on loan		1685.90	1355.12	1107.68	846.16	610.25

PART-I
FORM-13A

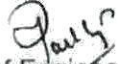
Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station KTPS-VI

(Amount in Cr)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.02%	12.96%	12.55%	11.73%	11.68%
WACC ¹	2408.00	2190.69	2009.68	1932.77	1790.92
RoCE	313.40	283.89	252.13	226.71	209.14


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 14

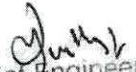
Working Capital

Name of the Company TSGENCO

Name of the Power Station KTPS-VI

(Amount in Crs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	Cost of Fuel	98.99	84.62	85.56	88.77	91.40
2	O & M expenses	8.00	8.51	9.04	9.61	12.26
3	Maintenance Spares	24.84	25.94	26.98	29.06	30.48
4	Receivables	296.49	263.85	261.50	264.82	272.45
	Total Working Capital	428.32	382.91	383.08	392.26	406.59


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM-18

Details/Information to be Submitted in respect of Fuel for Computation of Energy Charges¹

Name of the Company TSGENCO
Name of the Power Station KTPS-VI(1X500MW)

Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	202230	184840	168700
Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1617.84	1478.72	1349.6
Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
weighted average Price	RS/MT	3146.08	3374.37	3358.43
Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	3852	3820	4028

P. V. V.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE -A11

PART-I
FORM- 1

Summary Sheet


Name of the Company

TSGENCO

Name of the Power Station :

RTS B 1X62.5MW

S.No. 1	Particulars 2	(Rs in Crs)				
		2014-15 3	2015-16 4	2016-17 5	2017-18 6	2018-19 7
1.1	Depreciation	2.71	2.71	2.71	2.71	2.71
1.2	Return on Capital Employed ¹	8.48	11.55	12.34	10.18	10.22
1.3	O & M Expenses	32.37	34.40	36.57	38.87	49.58
	Total	43.56	48.66	51.62	51.76	62.51
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	2.48	2.92	3.04	2.86	2.82
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.13	0.11	0.11	0.1	0.12
2.3	Rate of Energy Charge ex-bus(REC) ^{3A,3B,3C}	2.63	3.03	3.15	2.96	2.94


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

Normative parameters considered for tariff computations


Name of the Company TSGENCO

Name of the Power Station RTS-B

Particulars	Unit	Year ending March					As per APERC norms 1 of 2008
		As per true up filings					
		2014-15	2015-16	2016-17	2017-18	2018-19	
Rate of Return on Capital Employed	%	13.40%	13.40%	13.40%	11.62%	11.62%	14
Target Availability	%	77%	77%	77%	77%	77%	77%
Target PLF	%	77%	77%	77%	77%	77%	77%
Auxiliary Energy Consumption	%	9.0	9.0	9.0	9.0	9.0	9.0
Gross Station Heat Rate	kCal/kWh	2800	2800	2800	2800	2800	2800
Specific Fuel Oil Consumption	ml/kWh	2	2	2	2	2	2
O&M Cost *	Rs.Lakh/MW	As per GTO	As per GTO	As per GTO	As per GTO	As per GTO	5 years average
Cost of Coal/Lignite for WC ¹	in Months	1	1	1	1	1	1
Cost of Secondary Fuel Oil for WC ¹	in Months	1	1	1	1	1	1
Fuel Cost for WC ²	in Months						
Liquid Fuel Stock for WC ²	in Months						
O & M Expenses for WC	in Months	1	1	1	1	1	1
Maintenance Spares for WC	%	1	1	1	1	1	1
Receivables for WC	in Months	2	2	2	2	2	2
Prime lending Rate of SBI	%	14.75	14.75	14.05	14.00	13.45	13.8
Incentive Rate	Paise / kWh	25	25	25	25	25	25

* payreversion commitment of 40% on salaries and allowances is extra from 1.4.2014

* GTO : Generation Tariff Order dated 05.06.2017 issued by Hon'ble TSERC


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

**PART-I
FORM- 7**

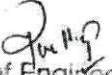
Details of Project Specific Loans

Name of the Company TSGENCO

Name of the Power Station RTS-B

(Rs in lacs)

Particulars 1	Packagel 2
Source of Loan ¹	PFC
Currency ²	Indian Rupee
Amount of Loan sanctioned	5320
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	3852.96
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	12.50%
Base Rate, if Floating Interest ⁷	
Margin, if Floating Interest ⁸	
Are there any Caps/Floor ⁹	No
If above is yes,specify caps/floor	
Moratorium Period ¹⁰	
Moratorium effective from	
Repayment Period ¹¹	12 years
Repayment effective from	15.10.2007
Repayment Frequency ¹²	Quarterly
Repayment Instalment ^{13,14}	48 months
Base Exchange Rate ¹⁶	


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

PART-I
FORM-11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

RTS-B

(Rs in Crs)

Financial Year	2014-15	2015-16	2016-17	2017-18	2018-19
1	3	4			
Depreciation on Capital Cost	65.97	86.09	92.74	92.76	93.26
Depreciation recovered during the Year	2.71	2.71	2.71	2.71	2.71
Depreciation & Advance against Depreciation recovered during the year	2.71	2.71	2.71	2.71	2.71
Cumulative Depreciation & Advance against Depreciation recovered upto the year	43.70	46.41	49.12	51.83	54.54

J. V. V.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
RTS B

Rs in Cr

Sl. No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.30	0.00	0.00	0.30	0.00	0.00	0.30	0.00	0.00	0.30	0.00	0.00	0.30	0.00	0.00
2	BUILDINGS	3.02%	2.32	0.00	0.05	2.32	0.00	0.05	2.32	0.00	0.05	2.32	0.00	0.05	2.32	0.00	0.05
3	PLANT AND MACHINERY	7.84%	60.69	20.12	3.32	80.81	7.26	5.00	88.07	0.02	5.15	88.09	-0.57	5.14	87.52	34.24	4.84
4	HYDRAULIC WORKS	7.84%	0.56	0.00	0.01	0.56	0.00	0.01	0.56	0.00	0.01	0.56	0.00	0.01	0.56	0.00	0.01
5	OTHER CIVIL WORKS	3.02%	2.57	0.00	0.03	2.57	0.00	0.02	2.57	0.00	0.02	2.57	0.00	0.02	2.57	0.00	0.02
6	FURNITURE AND FIXTURES	12.77%	0.13	0.00	0.00	0.13	0.01	0.01	0.14	0.00	0.00	0.14	0.00	0.00	0.14	0.00	0.00
7	VEHICLES	33.40%	0.23	0.00	0.00	0.23	0.00	0.00	0.23	0.14	0.02	0.37	0.00	0.05	0.37	0.00	0.05
8	COMPUTERS	33.40%	0.26	0.02	0.02	0.27	0.03	0.02	0.30	0.00	0.01	0.30	0.05	0.01	0.35	0.02	0.02
9	SPARES	7.84%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.04	0.50	0.00	0.04
10	OFFICE EQUIPMENT	0.1277	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.57	0.06	0.13
11	DEPRECIATION - DE-MERGER AP RE-ORG ACT-2014 A/C		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Intangible assets	0.334	0.0069	0	0	0.0069	0	0	0.0069	0	0	0.0069	0	0	0.0069	0	0
	Total		67.07	20.14	3.43	87.21	7.30	5.11	94.61	0.16	5.26	94.67	0.55	5.31	95.22	34.33	5.15

J. S. S.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

FORM- 13

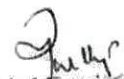
Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
RTS-B

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	5	6	7	8
1	Loan-1 (PFC)	5320.00					
	Gross loan - Opening	1921.97	3582.96	3582.96	3582.96	3582.96	3582.96
	Cumulative repayments of Loans upto previous year		1660.99	2034.98	2378.97	2755.21	3109.96
	Net loan - Opening		1921.97	1547.98	1203.99	827.75	473.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	
	Less: Repayment (s) of Loans during the year		373.99	343.99	376.24	354.75	354.75
	Net loan - Closing		1547.98	1203.99	827.75	473.00	118.25
	Average Net Loan		1734.98	1375.99	1015.87	650.38	295.63
	Rate of Interest on Loan		12.50%	12.50%	12.50%	10.20%	10.20%
	Interest on loan		206.21	163.69	114.39	64.66	29.37


Chief Engineer
Coal & Commercial
TSGENCO. V.S., Hyderabad-82

**PART-I
FORM- 13A**


Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station RTS-B

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.40%	13.40%	13.40%	11.62%	11.62%
WACC ²	63.25	86.22	92.11	87.67	87.97
RoCE	8.48	11.55	12.34	10.18	10.22


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

**PART-I
FORM- 14**

Working Capital

Name of the Company TSGENCO

Name of the Power Station RTS-B

(Amount in Crs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	Cost of Fuel	9.24	10.67	11.07	10.40	10.33
2	O & M expenses	2.70	2.87	3.05	3.24	4.13
3	Maintenance Spares	0.60	0.83	0.93	0.97	1.01
4	Receivables	25.74	29.46	30.74	29.42	31.08
	Total Working Capital	38.27	43.83	45.78	44.03	46.55

Jai S
Chief Engineer
Op. & Commercial
TSGENCO, S. Hyderabad-82

Details/Information to be Submitted in respect of Fuel for Computation of Energy Charges¹

Name of the Company TSGENCO
Name of the Power Station RTS-B
 (1X62.5MW)

Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	27595.7	24656.3	28035
Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	220.7656	197.2504	224.28
Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
Weighted average price	Rs/MT	3503.53	3457.56	3272.88
Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	3824	3960	3881

[Signature]
 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

ANNEXURE -A12
Summary Sheet

PART-I
FORM- 1

Name of the Company

TSGENCO

Name of the Power Station :

KTPP Stage I (1X500MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	183.85	184.28	185.35	184.10	182.97
1.2	Return on Capital Employed ¹	291.56	274.70	242.97	203.50	190.92
1.3	O & M Expenses	96.00	102.06	108.48	115.32	147.10
	Total	571.4	561.0	536.8	502.9	520.99
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	2.35	2.59	2.69	2.69	3.25
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.12	0.09	0.07	0.08	0.09
2.3	Rate of Energy Charge ex-bus(REC) ^{3A,3B,3C}	2.47	2.68	2.76	2.77	3.34


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

Plant Characteristics

Name of the Company TSGENCO

Name of the Power Station Kakatiya Thermal Power Project Stage -I

Basic characteristics of the plant¹ Coal based thermal plant with conventional Boiler and Steam Turbine.

Site Specific Features² A Non pit head station

Special Technological Features³

Environmental Regulation related features⁴ : ESPs are provided for pollution control in both the Units. Opacity meters are provided for SPM measurement

Any other special features

Fuel Details⁵	Primary Fuel	Secondary Fuel	Alternate Fuels
	Coal	Heavy Oil/ Light Diesel Oil	
Details	Module number or Unit		
(1)	(2)		
Installed Capacity (IC)	500MW		
Date of Commercial Operation (COD)	14.09.2010		
Type of cooling system ⁶	Closed cycle cooling system with ND cooling towers		
Type of Boiler Feed Pump ⁷	Motor driven & Turbine driven		

J. V. S.
 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

Normative parameters considered for tariff computations

Name of the Company TSGENCO

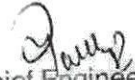
Name of the Power Station KTHPP-Stage1

Year Ending March

Particulars	Unit	As per true up filings					As per APERC norms
		2014-15	2015-16	2016-17	2017-18	2018-19	2014-19
		2					3
Rate of Return on Capital Employed	%	13.02%	13.13%	12.63%	11.73%	11.67%	Not mentioned
Target Availability	%	80%	80%	80%	80%	80%	80%
Target PLF	%	80%	80%	80%	80%	80%	80%
Auxiliary Energy Consumption	%	7.5	7.5	7.5	7.5	7.5	7.5
Gross Station Heat Rate	kCal/kWh	2450	2450	2450	2450	2450	2450
Specific Fuel Oil Consumption	ml/kWh	2	2	2	2	2	2
O&M Cost *	Rs.Lakh/MW	As per GTO	As per GTO	As per GTO	As per GTO	As per GTO	5 Years avg
Cost of Coal/Lignite for WC ¹	in Months	1	1	1	1	1	1
Cost of Secondary Fuel Oil for WC ¹	in Months	1	1	1	1	1	1
Fuel Cost for WC ²	in Months						
Liquid Fuel Stock for WC ²	in Months						
O & M Expenses for WC	in Months	1	1	1	1	1	1
Maintenance Spares for WC	%	1	1	1	1	1	1
Receivables for WC	in Months	2	2	2	2	2	2
Prime lending Rate of SBI	%	14.75	14.75	14.05	14.00	13.45	13.8
Incentive Rate	Paise / kWh	25	25	25	25	25	25

* payrevision commitment of 40% on salaries and allowances is extra from 1.4.2018

* GTO : Generation Tariff Order dated:05.06.2017 issued by Hon'ble TSERC.


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82


**PART-I
FORM-7**

Details of Project Specific Loans

Name of the Company TSGENCO
Name of the Power Station Kakatiya Thermal Power Porject Stage-I

(Amount in laacs)

Particulars	Package1	Package2	Package3	Package4	Package5
1	2	3	4	5	6
Source of Loan ¹	REC LTD.	VIJAYA BANK	SBI(the then SBH)	BANK OF BARODA	ANDHRA BANK
Currency ²	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee
Amount of Loan sanctioned	154451.00	20000.00	5856.00	25000.00	50000.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	154451.00	20000.00	5856.00	25000.00	11369.00
Interest Type ⁶	Floating	Floating	Fixed	Fixed	Floating
Fixed Interest Rate, if applicable			11.50%	11.25%	
Base Rate, if Floating Interest ⁷		Base Rate			Base Rate
Margin, if Floating Interest ⁸	No	No	No	No	No
Are there any Caps/Floor ⁹					
If above is yes,specify caps/floor					
Moratorium Period ¹⁰	54 months	3 Years	30 Months	2 Years	2 Years
Moratorium effective from	25.03.06	22.09.06	02.12.06	08.12.07	28.09.10
Repayment Period ¹¹	12 Years	10 Years	8 Years	10 Years	10 Years
Repayment effective from	30.09.2010	30.12.2009	30.04.2009	31.03.2010	30.10.2012
Repayment Frequency ¹²	Quarterly	Quarterly	Monthly	Quarterly	Monthly
Repayment Instalment ^{13,14}	48	40	96	40	120
Base Exchange Rate ¹⁶	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM-11

Statement of Depreciation

Name of the Company:

TSGENCO

Name of the Power Station:

KTPP-I

Rs in Crores

Financial Year	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Depreciation on Capital Cost	2529.96	2548.41	2559.68	2559.68	2587.51
Depreciation recovered during the Year	183.85	184.28	185.35	184.10	182.97
Depreciation & Advance against Depreciation recovered during the year	183.85	184.28	185.35	184.10	182.97
Cumulative Depreciation & Advance against Depreciation recovered upto the year	820.73	1005.01	1190.36	1374.46	1557.43

July
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPP Stage I

Rs in Cr

Sl. No.	Asset Name	Depreciation Rate as per MoP Deprecation rate schedule.	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	22.20	0.00	0.00	22.20	0.00	0.00	22.20	0.00	0.00	22.20	0.00	0.00	22.20	0.00	0.00
2	LAND DEPOSITS	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.58	0.00
3	BUILDINGS	3.02%	142.58	0.10	8.86	142.69	0.00	8.86	142.69	0.00	8.86	142.69	0.00	8.86	142.69	0.00	8.86
4	PLANT AND MACHINERY	7.84%	2,149.97	21.25	168.90	2,171.22	-5.21	170.54	2,166.00	0.00	170.11	2,166.00	0.00	168.78	2,166.00	-1.24	167.63
5	HYDRAULIC WORKS	7.84%	246.75	0.00	13.18	246.75	0.37	13.17	247.12	0.00	13.18	247.12	0.00	13.18	247.12	0.00	13.18
6	OTHER CIVIL WORKS	3.02%	69.94	6.89	2.11	76.83	0.58	2.36	77.41	0.00	2.38	77.41	5.63	2.38	83.04	0.25	2.55
7	FURNITURE AND FIXTURES	12.77%	1.64	0.03	0.13	1.68	0.03	0.13	1.71	0.01	0.09	1.71	-0.14	0.09	1.58	-0.23	0.06
8	VEHICLES	33.40%	16.75	0.00	1.83	16.75	0.23	0.03	16.98	0.00	0.08	16.98	0.00	0.08	16.98	1.00	0.03
9	COMPUTERS	33.40%	1.35	0.00	0.33	1.35	0.00	0.11	1.35	0.26	0.02	1.61	0.21	0.12	1.83	0.11	0.19
10	SPARES	7.84%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.20	1.71	22.20	0.59	1.74
11	OFFICE EQUIPMENT	12.77%	0.00	0.02	0.00	0.02	0.01	0.00	0.02	0.00	0.00	0.02	0.51	0.02	0.53	0.87	0.12
12	DEPRECIATION - DE-MERGER AP RE-ORG ACT-2014 A/C.		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			2,651.19	28.29	195.34	2,679.48	-4.00	195.19	2,675.48	0.27	194.72	2,675.75	28.42	195.22	2,704.17	42.94	194.35

[Signature]
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM-13

Calculation of Weighted Average Rate of Interest on Actual Loans¹


Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Kakatiya Thermal Power Project Stage-I

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	5	6	7	8	9
1	Loan-1 (REC)	154451.00					
	Gross loan - Opening	106185.06	154451.00	154451.00	154451.00	154451.00	154451.00
	Cumulative repayments of Loans upto previous year		48265.94	61136.86	74007.78	86878.70	99749.62
	Net loan - Opening	106185.06	106185.06	93314.14	80443.22	67572.30	54701.38
	Add: Drawal(s) during the Year		0	0	0	0	0
	Less: Repayment (s) of Loans during the year		12870.92	12870.92	12870.92	12870.92	12870.92
	Net loan - Closing		93314.14	80443.22	67572.30	54701.38	41830.47
	Average Net Loan		99749.60	86878.68	74007.76	61136.84	48265.93
	Rate of Interest on Loan		12.50%	12.50%	12.25%	9.95%	9.95%
	Interest on loan		12471.79	10850.04	8580.51	6134.28	4853.92
2	Loan (Vijaya Bank)	20,000.00					
	Gross loan - Opening	10,991.96	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00
	Cumulative repayments of Loans upto previous year		9,008.04	11,009.98	13,013.94	15,015.57	17,017.78
	Net loan - Opening	10,991.96	10,991.96	8,990.02	6,986.06	4,984.43	2,982.22
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		2,001.94	2,003.96	2,001.63	2,002.21	2,001.60
	Net loan - Closing		8,990.02	6,986.06	4,984.43	2,982.22	980.62
	Average Net Loan		9,990.99	7,988.04	5,985.25	3,983.33	1,981.42
	Rate of Interest on Loan		10.25%	10.00%	9.65%	9.65%	9.65%
	Interest on loan		1047.42	814.41	600.27	404.24	210.60

3	Loan (SBH)	5,856.00					
	Gross loan - Opening	2,066.28	5,856.00	5,856.00	5,856.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		3,789.72	4,546.40	5,302.96	0.00	0.00
	Net loan - Opening		2,066.28	1,309.60	553.04	0.00	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0
	Less: Repayment (s) of Loans during the year		756.68	756.56	553.04	0.00	0.00
	Net loan - Closing		1,309.60	553.04	0.00	0.00	0.00
	Average Net Loan		1,687.94	931.32	276.52	0.00	0.00
	Rate of Interest on Loan		11.50%	11.50%	11.50%		
	Interest on loan		197.16	110.48	25.62	0.00	0.00
4	Loan (Bank of Baroda)	25,000.00					
	Gross loan - Opening	14,339.23	25,000.00	25,000.00	25,000.00	25,000.00	25,000.00
	Cumulative repayments of Loans upto previous year		10,660.77	13,162.44	15,663.44	18,164.74	20,699.72
	Net loan - Opening		14,339.23	11,837.56	9,336.56	6,835.26	4,300.28
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		2,501.67	2,501.00	2,501.30	2,534.98	2,505.86
	Net loan - Closing		11,837.56	9,336.56	6,835.26	4,300.28	1,794.42
	Average Net Loan		13,088.40	10,587.06	8,085.91	5,567.77	3,047.35
	Rate of Interest on Loan		11.25%	11.25%	11.25%	10.80%	10.80%
	Interest on loan		1,506.24	1,228.08	941.80	622.33	345.74
5	Loan (Andhra Bank)	11,369.00					
	Gross loan - Opening	7,413.34	11,369.00	11,369.00	11,369.00	11,369.00	11,369.00
	Cumulative repayments of Loans upto previous year		3,955.66	5,084.39	6,215.11	7,343.67	8,472.67
	Net loan - Opening		7,413.34	6,284.61	5,153.89	4,025.33	2,896.33
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		1,128.73	1,130.72	1,128.56	1,129.00	2,896.33
	Net loan - Closing		6,284.61	5,153.89	4,025.33	2,896.33	0.00
	Average Net Loan		6,848.98	5,719.25	4,589.61	3,460.83	1,448.17
	Rate of Interest on Loan		10.25%	10.00%	9.75%	9.70%	9.55%
	Interest on loan		706.25	573.50	449.80	337.42	82.27


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PART-I
FORM-13A

Calculation of Return on Capital Employed

Name of the Company

TSGENCO

Name of the Power Station

KTPP-I

(Rs in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.02%	13.13%	12.63%	11.73%	11.67%
WACC ¹	2239.00	2092.66	1923.73	1735.33	1635.85
RoCE	291.56	274.70	242.97	203.50	190.92

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**PART-I
FORM- 14**

Working Capital

Name of the Company TSGENCO

Name of the Power Station KTPP-I

Sl. No.	Particulars	(Amount in Crs)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	Cost of Fuel	72.12	78.47	80.59	80.88	97.53
2	O & M expenses	8.00	8.51	9.04	9.61	12.26
3	Maintenance Spares	26.31	27.56	28.78	29.93	31.12
4	Recievables	239.48	250.45	250.65	245.59	281.89
	Total Working Capital	345.92	364.98	369.06	366.01	422.80

[Signature]
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**PART-I
FORM-18**

Details/Information to be Submitted in respect of Fuel for Computation of Energy

Charges


Name of the Company

TSGENCO

Name of the Power Station

KTPP -I

Sl. No.	Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	186655	185155	181185
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1493.24	1481.24	1449.48
14	Total amount Charged for coal/lignite supplied including Transportation (8+13) weighted average price	(Rs.) Rs/MT	5561.39	5472.91	5450.94
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	3906	3958	3906


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ANNEXURE -A19
Summary Sheet

PART-I
FORM- 1

Name of the Company

TSGENCO

Name of the Power Station :

KTPP-Stage-II (600MW)

		(Rs in Crs)				
S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	0.00	0.00	164.67	171.01	171.01
1.2	Return on Capital Employed ¹	0.00	9.77	451.85	415.73	409.45
1.3	O & M Expenses	0.00	2.41	117.14	124.56	158.81
	Total	0.00	12.18	733.66	711.30	739.27
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	0	2.47	2.43	2.47	2.9
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0	0.01	0.01	0.02	0.02
2.3	Rate of Energy Charge ex-bus(REC) ^{3A,3B,3C}	0	2.48	2.44	2.49	2.92

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Plant Characteristics

Name of the Company TSGENCO

Name of the Power Station Kakatiya Thermal Power Project Stage -II

Basic characteristics of the plant¹ Coal based thermal plant with conventional Boiler and Steam Turbine.

Special Features of the Plant


Site Specific Features² A Non pit head station

Special Technological Features³ Variable frequency drives for Boiler Feed Pumps are provided.

Environmental Regulation related features⁴ : ESPs are provided for pollution control in both the Units. Opacity meters are provided for SPM measurement

Any other special features

Fuel Details ⁵	Primary Fuel	Secondary Fuel	Alternate Fuels	
	Coal	Heavy Oil/ Light Diesel Oil		
Details	Module number or Unit			
(1)	(2)			
Installed Capacity (IC)	600MW			
Date of Commercial Operation (COD)	24.03.2016			
Type of cooling system ⁶	Closed cycle cooling system with ND cooling			
Type of Boiler Feed Pump ⁷	Motor driven & Turbine driven			


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PART-I
FORM-3

Normative parameters considered for tariff computations

Name of the Company TSGENCO
Name of the Power Station KTHP-Stage-II

Particulars	Unit	As per true up filings					As per TS/AP ERC norms
		2014-15	2015-16	2016-17	2017-18	2018-19	Iof 2008
-1		2					3
Rate of Return on Capital Employed	%	0.00%	12.96%	13.00%	12.52%	11.62%	Not mentioned
Target Availability	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Target PLF	%	85.00%	85.00%	85.00%	85.00%	85.00%	85.00%
Auxiliary Energy Consumption	%	5.25	5.25	5.25	5.25	5.25	5.25
Gross Station Heat Rate	kCal/kWh	2305.11	2305.11	2305.11	2305.11	2305.11	2305.11
Specific Fuel Oil Consumption	ml/kWh		0.5	0.5	0.5	0.5	0.5
O&M Cost *	Rs.Lakh/MW	As per GTO	As per GTO	As per GTO	As per GTO	As per GTO	
Cost of Coal/Lignite for WC ¹	in Months	1	1	1	1	1	1
Cost of Secondary Fuel Oil for WC ¹	in Months	1	1	1	1	1	1
Fuel Cost for WC ²	in Months						
Liquid Fuel Stock for WC ²	in Months						
O & M Expenses for WC	in Months	1	1	1	1	1	1
Maintenance Spares for WC	%	1	1	1	1	1	1
Receivables for WC	in Months	2	2	2	2	2	2
Prime lending Rate of SBI	%	14.75	14.75	14.05	14.00	13.45	13.8
Incentive Rate	Paise / kWh	25	25	25	25	25	25

* payrevision commitment of 40% on salaries and allowances is extra from 1.4.2018.

* GTO : Generation Tariff Order dated 05.06.2017 issued by Hon'ble TSERC.

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Details of Project Specific Loans

PART-I


FORM- 7

Name of the Company
Name of the Power Station

TELANAGANA STATE POWER
GENERATION CORPORATION LIMITED
Kakatiya Thermal Power Project Stage-II

(Amount in lacs)

Particulars	Package1	Package2
1	2	3
Source of Loan ¹	REC Ltd..	Andhra Bank
Currency ²	Inidan Ruppe	Inidan Ruppe
Amount of Loan sanctioned	300529.00	
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	144964.12	46161.00
Interest Type ⁶	Floating	Floating
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷		Base Rate
Margin, if Floating Interest ⁸	NO	NO
Are there any Caps/Floor ⁹		
If above is yes,specify caps/floor		
Moratorium Period ¹⁰	6 years 6 months	3 years
Moratorium effective from	20.01.2009	24.11.10
Repayment Period ¹¹	12 years	10 Years
Repayment effective from	30.09.2016	28.02.14
Repayment Frequency ¹²	Quarterly	Quarterly
Repayment Instalment ^{13,14}	48	40
Base Exchange Rate ¹⁶	Not Applicable	Not Applicable


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**PART-I
FORM- 11**

Statement of Depreciation

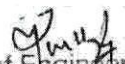
Name of the Company

TSGENCO

Name of the Power Station

KTPP-II

Financial Year	Amount in Crs.				
	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Depreciation on Capital Cost	0.00	3039.35	3039.35	3045.77	3360.74
Depreciation recovered during the Year	0.00	0.00	164.67	171.01	171.01
Depreciation & Advance against Depreciation recovered during the year	0	0	164.67	171.01	171.01
Cumulative Depreciation & Advance against Depreciation recovered upto the year	0	0	164.67	335.68	506.69


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Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPP Stage II

Amount in Rs. Crs.

Sl. No.	Asset Name	Depreciation Rate as per MoP Deprecation rate schedule	2015-16		2016-17			2017-18			2018-19			
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount
1	BUILDINGS	3.02%	0.00	87.31	0.00	87.31	0.00	4.75	87.31	1.11	4.75	88.42	0.00	4.82
2	PLANT AND MACHINERY	7.84%	0.00	2,601.09	0.00	2,601.09	6.36	204.30	2,607.45	156.58	204.42	2,764.03	23.57	217.13
3	HYDRAULIC WORKS	7.84%	0.00	541.99	0.00	541.99	0.00	42.49	541.99	4.03	42.49	546.01	2.75	42.81
4	OTHER CIVIL WORKS	3.02%	0.00	4.07	0.00	4.07	0.00	0.12	4.07	7.46	0.12	11.53	0.98	0.38
5	FURNITURE AND FIXTURES	12.77%	0.00	0.07	0.00	0.07	0.04	0.02	0.11	0.07	0.02	0.18	0.00	0.02
6	COMPUTERS	33.40%	0.00	0.03	0.00	0.03	0.12	0.01	0.14	0.05	0.05	0.19	0.00	0.06
7	OTH FIXED ASSETS & CAPITAL SPARES	7.84%	0.00	3.29	0.00	3.29	0.00	0.26	3.29	150.44	11.22	153.74	18.22	12.29
8	OFFICE EQUIPMENT		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
			0.00	3,237.85	0.00	3,237.85	6.52	251.95	3,244.36	319.73	263.08	3,564.10	45.56	277.50

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PART-I
FORM- 13

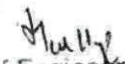
Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Kakatiya Thermal Power Project Stage-II

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	5	6	7	8	9
1	Loan-1 (REC)	300529.00					
	Gross loan - Opening	144964.12	144964.12	186262.00	223525.74	248461.07	250488.12
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	15128.78	36077.56
	Net loan - Opening		144964.12	186262.00	223525.74	233332.29	214410.56
	Add: Drawal(s) during the Year		41297.88	37263.74	24935.33	2027.05	969.51
	Less: Repayment (s) of Loans during the year		0.00	0.00	15128.78	20948.78	21309.30
	Net loan - Closing		186262.00	223525.74	233332.29	214410.56	194070.77
	Average Net Loan		165613.06	204893.87	228429.02	223871.43	204240.67
	Rate of Interest on Loan		12.50%	12.25%	12.25%	12.25%	12.25%
	Interest on loan		20450.19	25023.71	27978.99	25623.44	20400.61
2	Loan-2 (Andhra Bank)	46200.00					
	Gross loan - Opening	45004.40	46200.00	46200.00	46200.00	46200.00	46200.00
	Cumulative repayments of Loans upto previous year		1195.60	5820.27	10458.08	15074.77	19700.50
	Net loan - Opening		45004.40	40379.73	35741.92	31125.23	26499.50
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		4624.67	4637.81	4616.69	4625.73	4629.66
	Net loan - Closing		40379.73	35741.92	31125.23	26499.50	21869.84
	Average Net Loan		42692.07	38060.83	33433.58	28812.37	24184.67
	Rate of Interest on Loan		10.25%	9.75%	9.75%	9.70%	9.55%
	Interest on loan		4391.34	3803.00	3268.37	2790.41	2318.46


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PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station K TPP-II

Amount in Rs. Crs.
0

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	0.00%	12.96%	13.00%	12.52%	11.62%
*WACC ¹	0.00	3449.56	3475.52	3321.08	3525.18
RoCE	0.00	9.77	451.85	415.73	409.45

* K TPP II COD on 24.03.2016 for ROCE Consider 8days for 2015-16

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**PART-I
FORM-14**

Working Capital

Name of the Company TSGENCO
Name of the Power Station KTHPP-II

Sl. No.	Particulars	Amount in Rs. Crs.				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	92.58	90.84	92.70	108.71
2	O & M expenses	0.00	9.19	9.76	10.38	13.23
3	Maintenance Spares	0.00	30.39	31.61	32.94	37.53
4	Receivables	0.00	278.05	303.96	303.96	340.63
*	Total Working Capital		410.21	436.17	439.98	500.11

* KTHPP II COD on 24.03.2016 for WC Consider 8 days for 2015-16

[Signature]
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PART-I
FORM-18

Details/Information to be Submitted in respect of Fuel for Computation of Energy Charges

Name of the Company TSGENCO
Name of the Power Station KTHP Stage II

Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	0.00	120532.00	208680.00
Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	0.00	964.26	1669.44
Total amount Charged for coal/lignite supplied including Transportation (8+13)	(Rs.)			
weighted average price	(Rs./MT)	0.00	5472.91	5450.94
Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	0	4106	3989


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TSGENCO, V.S., Hyderabad-82

ANNEXURE 14
Summary Sheet

PART-I
FORM- 1

Name of the Company

TSGENCO

Name of the Power Station :

Nagarjuna Sagar complex(Main & Left)(875.6MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	34.85	31.93	31.67	34.18	47.28
1.2	Return on Capital Employed	68.90	64.46	55.88	66.44	146.13
1.3	O & M Expenses	50.91	52.95	55.07	57.27	71.47
	Total	154.66	149.34	142.62	157.89	264.88

G. V. V.
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Coal & Commercial
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NAME OF COMPANY : TSGENCO
NAME OF POWER STATION : NAGARJUNA SAGAR COMPLEX

Form 2 & 3

SALIENT FEATURES OF HYDROELECTRIC PROJECT

1. NAGARJUNA SAGAR HYDRO ELECTRIC SCHEME

I. GENERAL

1. Location : Nandikonda Village, Nalgonda District, Telangana
2. Category : Hydro Power Project
3. Capacity : 1 x 110 MW + 7 X 100.8 MW = 815.6 MW
4. River : Krishna
5. Dam : Nagarjuna Sagar
6. No. of Units : 8 Nos.
7. Design Energy(in MU) : 992 MU

II. HYDROLOGY:

1. Reservoir : Nagarjuna Sagar
2. Catchment Area : 83087 Sq. Miles
3. Max. flood discharge : 1060000 Cusecs
4. Live Storage : 202.47 TMC Ft
5. Gross Storage : 408.24 TMC Ft.
6. Dead Storage : 205.77 TMC Ft.
7. Generation per TMC : 5.5 MU
8. Design Head (Max/Min) : 93 Mts (305.13 Ft.) / 71.5 Mts (234.6 Ft.)
9. Max. gross head : 105 Mts. (344.5 Ft.)
10. Net Head : 93 Mts (305.13 Ft.)
11. Full Reservoir level (FRL) : 590.00 Ft.
12. Min. Draw Down Level (MDDL) : 510.00 Ft.
13. Tail Race water level for
 - a) Max. Discharge : 295 Ft.
 - b) Min. Discharge : 240 Ft.
14. Design Disch. through Machine : 146 Cumeecs (5156 Cusecs)

III. COMMISSIONING DETAILS

- | | |
|----------|-----------------------|
| Unit - 1 | : 7th March' 1978 |
| Unit - 2 | : 8th April' 1980 |
| Unit - 3 | : 11th January' 1981 |
| Unit - 4 | : 22nd June' 1982 |
| Unit - 5 | : 31st March' 1983 |
| Unit - 6 | : 26th October' 1984 |
| Unit - 7 | : 31st March' 1985 |
| Unit - 8 | : 24th December' 1985 |

IV. TECHNICAL:

1. Turbine
 - a) Type : Vertical, Francis
 - b) Make : BHEL (Unit - 1)
Mitsubishi, Japan (Unit - 2 to 8)
 - c) Net Head : 91.44 Mts (Unit - 1) 105 Mts (Unit - 2 to 8)
 - d) Rated Output : 110 MW (Unit - 1)
103 MW (Unit - 2 to 8)
 - e) Normal Speed : 187.5 RPM
 - f) Runway speed : 375 RPM
 - g) Disc. Through Machine : 146 Cumeecs
- I. Generator
 - a) Type : Synchronous
 - b) Make : BHEL (Unit - 1)
Mitsubishi, Japan (Unit - 2 to 8)
 - c) Rated Voltage : 11 KV (Unit - 1)
13.8 KV (Unit - 2 to 8)
 - d) Rated Out put : 110 MW (Unit - 1)
100.8 MW (Unit - 2 to 8)

- e) Current : 6420 A (Unit - 1) 4690 A (Unit - 2 to 8)
 f) Speed : 187.5 RPM (Unit - 1)
 157.9 RPM (Unit - 2 to 8)
 g) Power Factor : 0.9 Lag
 2 Generator Transformer
 a) Make : M/s. TELK (Stage - I) M/s. BHEL (Stage - II)
 b) Capacity : 42.5 MVA, Single Phase 45 MVA, Single Phase
 c) Voltage Ratio : 11 KV / 220 KV
 13.8 KV / 220 KV
 4 Transmission Line : 220 KV (4 Nos.)
 : 132 KV (2 Nos.)

2. NAGARJUNA SAGAR LEFT CANAL POWER HOUSE

I. GENERAL

1. Location : On the Left side of the Nagarjuna Sagar Head Regulator
 2. Category : Irrigation & Power, Canal Power Project (Pit - Type Power House)
 3. Capacity : 2 x 30 MW = 60 MW
 4. River : Krishna River (Utilising Irrigation discharges from Nagarjuna Sagar Left Canal).
 5. Dam : Nagarjuna Sagar
 6. No. of Units : 2 Nos.
 7. Design energy (in Mu) : 127 MU

II. HYDROLOGY:

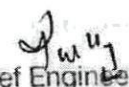
1. Reservoir : Nagarjuna Sagar
 2. Max. discharge : 15000 Cusecs
 3. Design Head : 26 Mts. (85.30 Ft.)
 4. Gross head : 24.07 Mts. (78.97 Ft.)
 5. Net Head : 22.95 Mts. (75.3 Ft.)
 6. Min. Draw Down Level (MDDL) : 530.00 Ft.
 7. Design Disch. through Machine : 5086 Cusecs (144 cumecs)

IV. COMMISSIONING DETAILS

- Unit - 1 : 27th September 1992
 Unit - 2 : 27th September 1992

V. TECHNICAL:

1. Turbine
 a) Type : Vertical Kaplan
 b) Make : M/s. BOVING, U.K.
 c) Net Head : 26 Mts.
 d) Rated Output : 30 MW
 e) Normal Speed : 150 RPM
 f) Runway speed : 360 RPM
 g) Disc. Through Machine :
 3. Generator
 a) Type : Synchronous
 b) Make : M/s. GEC Large Machines Ltd., U.K.
 c) Rated Voltage : 11 KV
 d) Rated Out put : 30 MW
 e) Current : 1850 A
 f) Speed : 150 RPM
 g) Power Factor : 0.85 Lag
 4. Generator Transformer
 a) Make : M/s. BHEL
 b) Capacity : 40 MVA, 3 - Phase
 c) Voltage Ratio : 11 / 132 KV
 5. Transmission Line : 132 KV (2 Nos.)


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Details of Project Specific Loans

**PART-I
FORM- 7**

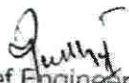
TELANGANA STATE POWER GENERATION
CORPORATION LIMITED

Name of the Company
Name of the Power Station

Nagarjuna Sagar Complex

Rs in lacs

Particulars	Package1
1	2
Source of Loan ¹	PFC Ltd.,
Currency ²	Indian Rupee
Amount of Loan sanctioned	2668.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	2668.00
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	
Margin, if Floating Interest ⁸	
Are there any Caps/Floor ⁹	NO
If above is yes,specify caps/floor	
Moratorium Period ¹⁰	5 years
Moratorium effective from	06.12.04
Repayment Period ¹¹	12 years
Repayment effective from	15.10.2009
Repayment Frequency ¹²	Quarterly
Repayment Instalment ^{13,14}	48
Base Exchange Rate ¹⁶	Not Applicable


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

Details of Project Specific Loans

**PART-I
FORM- 7**


TELANGANA STATE POWER
GENERATION CORPORATION
LIMITED

Name of the Company
Name of the Power Station

Nagarjuna Sagar Tailpond Dam

Rs in lacs

Particulars 1	Package1 2	
Source of Loan ¹	PFC Ltd.,	
Currency ²	Inidan Ruppe	
Amount of Loan sanctioned		67486.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}		37361.31
Interest Type ⁶	Floating	
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷		
Margin, if Floating Interest ⁸		
Are there any Caps/Floor ⁹	NO	
If above is yes,specify caps/floor		
Moratorium Period ¹⁰	3 years	
Moratorium effective from	08.01.08	
Repayment Period ¹¹	20 years	
Repayment effective from	15.10.11	
Repayment Frequency ¹²	Quarterly	
Repayment Instalment ^{13,14}		80
Base Exchange Rate ¹⁶	Not Applicable	


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

NAGARJUNA SAGAR COMPLEX

(Rs in Crs)

Financial Year	Upto 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
Depreciation on Capital Cost	1071.71	1095.93	1097.41	1097.41	1248.02	1948.10
Depreciation recovered during the Year	34.85	34.85	31.93	31.67	34.18	47.28
Depreciation & Advance against Depreciation recovered during the year	34.85	34.85	31.93	31.67	34.18	47.28
Cumulative Depreciation & Advance against Depreciation recovered upto the year	635.50	670.35	702.28	733.95	768.13	815.41

[Signature]
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
NSHES

Rs. in Cr

Sl. No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00
2	BUILDINGS	3.02%	51.83	-2.39	1.08	49.44	0.00	1.08	49.44	0.01	1.11	49.45	0.00	1.05	49.45	0.00	1.02
3	PLANT AND MACHINERY	3.40%	1,099.59	-102.72	26.80	996.86	0.00	26.21	996.86	13.24	29.56	1,010.10	0.50	29.53	1,010.61	0.05	29.53
4	HYDRAULIC WORKS	3.40%	50.61	-4.72	1.19	45.90	0.00	1.18	45.90	0.00	1.29	45.90	783.33	4.11	829.22	0.46	16.76
5	OTHER CIVIL WORKS	3.02%	8.92	-0.48	0.23	8.45	0.00	0.23	8.45	0.00	0.26	8.45	0.00	0.26	8.45	0.14	0.26
6	FURNITURE AND FIXTURES	12.77%	0.20	-0.01	0.01	0.18	0.40	0.04	0.59	0.12	0.07	0.71	0.03	0.07	0.73	0.07	0.08
7	VEHICLES	33.40%	0.18	-0.02	0.00	0.16	-0.02	0.00	0.14	0.00	0.00	0.14	0.00	0.00	0.14	0.00	0.04
8	COMPUTERS	33.40%	0.31	0.19	0.08	0.50	0.01	0.08	0.50	0.06	0.08	0.57	0.06	0.03	0.63	0.01	0.00
9	NSTPD DE-MERGER PLAN-		0.00	40.50	0.00	40.50	0.00	0.00	40.50	0.00	0.00	40.50	0.00	0.00	40.50	0.00	0.00
10	CAPITAL SPARES	3.40%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.59	0.00	0.05
11	OFFICE EQUIPMENT	12.77%	0.09	0.13	0.00	0.22	0.06	0.07	0.28	0.04	0.07	0.33	0.07	0.06	0.39	0.27	0.05
12	DEPRECIATION - DE-MERGER AP RE-ORG ACT-2014 A/C		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Intangible assets	33.40%	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00
			1,211.77	-69.52	29.40	1,142.25	0.45	28.89	1,142.70	13.47	32.43	1,156.17	784.57	35.11	1,940.75	0.99	47.79

[Signature]
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Nagarjuna Sagar HES

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	5	6	7	8
1	Loan-1 (PFC)	2668.00					
	Gross loan - Opening	1866.43	2668.00	2668.00	2668.00	2668.00	2668.00
	Cumulative repayments of Loans upto previous year		801.57	1050.42	1299.28	1570.36	1823.66
	Net loan - Opening		1866.43	1617.58	1368.72	1097.64	844.34
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	
	Less: Repayment (s) of Loans during the year		248.85	248.86	271.08	253.30	253.30
	Net loan - Closing		1617.58	1368.72	1097.64	844.34	591.04
	Average Net Loan		1742.01	1493.15	1233.18	970.99	717.69
	Rate of Interest on Loan		12.50%	12.50%	12.50%	10.20%	10.20%
	Interest on loan		205.79	174.86	137.23	96.58	71.38

Jally
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company TSGENCO
Name of the Power Station NAGARJUNASAGAR COMPLEX

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base	13.40%	13.40%	12.44%	11.62%	11.62%
WACC	514.16	481.04	449.15	571.98	1258.13
RoCE	68.90	64.46	55.88	66.44	146.13

J. V. V.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 14

Working Capital

Name of the Company


TSGENCO

Name of the Power Station

NAGARJUNASAGAR COMPLEX

(Amount in Crs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	O & M expenses	4.24	4.41	4.59	4.77	5.96
2	Maintenance Spares	23.71	24.67	25.66	26.82	28.06
3	Receivables	25.78	24.89	23.77	26.31	44.15
	Total Working Capital	53.72	53.97	54.02	57.91	78.16


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE-A15
Summary Sheet

FORM- 1

Name of the Company TSGENCO
Name of the Power Station : SLBHES (6X150MW)

S.No.	Particulars	(Rs in Crs)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	113.91	113.91	113.91	113.91	113.91
1.2	Return on Capital Employed ¹	341.20	325.50	310.69	295.42	280.50
1.3	O & M Expenses	41.29	42.94	44.66	46.44	57.96
	Total	496.40	482.35	469.26	455.77	452.37

[Signature]
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

NAME OF COMPANY : TSGENCO

Form 2&3

NAME OF POWER STATION : SRISAILAM LEFT BANK POWER STATION

SALIENT FEATURES OF HYDROELECTRIC PROJECT

I. GENERAL

1. Location : Srisaillam, Telangana State.
2. Category : Underground Hydel Power House, Pumped Storage Scheme
3. Capacity : 6 x 150 MW = 900 MW
4. Designed capacity : 6 x 153 MW = 918 MW
5. River : KRISHNA
6. Dam : Srisaillam Dam, across Krishna River, Telangana.
7. No. of Units : SIX
8. Design Energy (in Mu) : 1000 MU

II. HYDROLOGY:

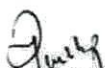
1. Reservoir : Srisaillam
2. Catchment Area : 2,03,597 Sq. K.M (79,530 Sq. Miles)
3. Max. flood discharge : 30,316 Cumecs
4. Live Storage : 247.79 TMC Ft.
5. Gross Storage : 308.06 TMC Ft.
(Between FRL: 885 Ft. and MDDL: 805 Ft)
6. Dead Storage : 60.3 TMC Ft. (2122 MCM) at 805 Ft.
7. Generation per TMC : 5.5 MU
8. Design Head : 91 M (Turbine Mode) 95 M (Pump Mode)
9. Max. gross head : 375 Ft. (114.3 M) Turbine Mode
10. Design Net Head : 82.8 M (153 MW)
11. Net Head Max/Min : 107.1 M (176 MW) / 65.3 M (106 MW) (Turbine Mode)
12. Full Reservoir level (FRL): 885 Ft. (269.75 M)
13. Min. Draw Down Level (MDDL) : 805 Ft. (245.37 M)
14. Tail Race water level for
 - a) Max. Discharge : 590 Ft.
 - b) Min. Discharge : 535 Ft.
15. Design Disch. through Machine : 7484 Cusecs (211.9 Cumecs)

III. COMMISSIONING DETAILS

- | | |
|----------|-----------------------|
| Unit - 1 | : 26th April' 2001 |
| Unit - 2 | : 12th November' 2001 |
| Unit - 3 | : 19th April' 2002 |
| Unit - 4 | : 29th November' 2002 |
| Unit - 5 | : 28th March' 2003 |
| Unit - 6 | : 4th September' 2003 |

IV. TECHNICAL:

1. **TURBINE**
 - a) Type : Vertical Shaft, Francis Reversing
 - b) Make : M/s. Hitachi, Japan
 - c) Net Head Max./Min : 107.1 M / 65.3 M
 - d) Design Net Head : 82.8 M
 - e) Rated Output : 153 MW
 - f) Output Max./ Min : 176 MW / 106 MW
 - g) Normal Speed : 136.4 RPM
 - h) Runway speed : 231 RPM


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

i) Disc. Through Machine : 6467 Cusecs (183.1 Cumecs)

1. GENERATOR - MOTOR

- a) Type : Synchronous Generator, Semi Umbrella
- b) Make : M/s. Mitsubishi Electric Corporation (MELCO), Japan
- c) Rated Voltage : 13.8 KV
- d) Rated Out put : 150 MW/ 190 MVA (Generating Mode)

175 MW (Motoring Mode)

- e) Current : 8,500 A
- f) Speed : 136.4 RPM
- g) Power Factor : 0.9 Lagging (Generator Mode)

0.95 Leading (Motoring Mode)

3. GENERATOR TRANSFORMER

- a) Make : M/s. TELK, Kerala
- b) Capacity : 190 MVA, 3 - Phase
- c) Voltage Ratio : 13.8 KV/ 400 KV

4. TRANSMISSION LINE :

- a) No. of Feeders : 5 Nos., 400 KV
- b) Name of the Feeders : Vijayawada I & II (2 Nos.)

Hyderabad I & II (2Nos.) Kurnool - I (1 No.)

5. 400 KV GAS INSULATED SWITCH GEAR

- a) No. of Feeders : 5 Nos.
- b) No. of generator Transformers : 6 Nos.
- c) No. of Station Transformers : 2 Nos.
- d) Bus coupler : 1 No.
- e) No. of Busses : 2 Nos. GENERAL

Normal Voltage : 400kV

Lightening impulse withstand voltage: 1425 kVp

Power frequency withstand voltage: 520 kV(50Hz)

Short time current rating for 1sec : 40kA

Frequency : 50 Hz

Standards : IEC

6. 400 KV XLPE POWER CABLE

- a) Type : 400kV, 1000Sq. mm
- b) Make : M/s. Hitachi cable Limited, Japan
- c) Rated Voltage : 400 kV
- d) Max. working voltage : 440 kV
- e) Basic impulse insulation level: 1425 kV
- f) Max. Permissible operating : Temperature

90o C

g) Max. Permissible Temp. : during emergency

105o C

h) Max. Permissible Temp. : during short circuit

230o C

i) No. of Conductors : 1 No.

j) Standards : IEC-840

Jully
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I**FORM- 7**

TELANGANA STATE POWER
GENERATION CORPORATION
LIMITED

Name of the Company

Name of the Power Station

Srisaillam Left Bank HES

Rs in lacs

Particulars	Package1	
	1	2
Source of Loan ¹	PFC Ltd.,	
Currency ²	Inidan Ruppe	
Amount of Loan sanctioned		11500.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}		10540.58
Interest Type ⁶	Floating	
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷		
Margin, if Floating Interest ⁸		
Are there any Caps/Floor ⁹	NO	
If above is yes,specify caps/floor		
Moratorium Period ¹⁰		
Moratorium effective from		
Repayment Period ¹¹	12 years	
Repayment effective from		
Repayment Frequency ¹²	Quarterly	
Repayment Instalment ^{13,14}	48	
Base Exchange Rate ¹⁶	Not Applicable	

July
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

SLBHES

Financial Year	Rs.in Cr				
	2014-15	2015-16	2016-17	2017-18	2018-19
1	3	4	5	6	7
Depreciation on Capital Cost	3375.66	3372.69	3376.06	3376.06	3376.06
Depreciation recovered during the Year	113.91	113.91	113.91	113.91	113.91
Depreciation & Advance against Depreciation recovered during the year	113.91	113.91	113.91	113.91	113.91
Cumulative Depreciation & Advance against Depreciation recovered upto the year	1077.83	1191.74	1305.65	1419.56	1533.47


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
SLBHES

Rs. in Cr

Sl. No	Asset Name	Depreciation Rate as per MoP Deprecation rate schedule	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.30	0.00	0.00	0.30	0.00	0.00	0.30	0.00	0.00	0.30	0.00	0.00	0.30	0.00	0.00
2	BUILDINGS	3.02%	434.68	0.00	14.70	434.68	0.00	14.70	434.68	0.00	14.70	434.68	0.00	14.70	434.68	0.00	14.70
3	PLANT AND MACHINERY	3.40%	2,484.29	-2.97	88.70	2,481.31	3.37	86.94	2,484.69	-0.35	86.81	2,484.34	0.84	86.78	2,485.18	1.54	86.71
4	HYDRAULIC WORKS	3.40%	431.27	0.00	14.65	431.27	0.00	14.64	431.27	0.00	14.62	431.27	0.00	14.62	431.27	0.00	14.62
5	OTHER CIVIL WORKS	3.02%	14.62	0.00	0.44	14.62	0.00	0.44	14.62	0.00	0.44	14.62	0.00	0.44	14.62	0.00	0.44
6	FURNITURE AND FIXTURES	12.77%	0.27	0.00	0.01	0.27	0.00	0.01	0.27	0.05	0.00	0.32	-0.03	0.01	0.29	0.26	0.06
7	VEHICLES	33.40%	0.56	0.00	0.00	0.56	0.00	0.00	0.56	0.00	0.00	0.56	0.00	0.00	0.56	0.00	0.00
8	COMPUTERS	33.40%	0.28	0.19	0.07	0.48	0.00	0.07	0.48	0.04	0.07	0.52	0.09	0.03	0.60	0.00	0.05
9	CAPITAL SPARES	3.40%	3.01	0.00	0.10	3.01	0.00	0.10	3.01	0.00	0.10	3.01	0.00	0.10	3.01	0.00	0.10
10	OFFICE EQUIPMENT	12.77%	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.02	0.02	0.03	0.81	0.02	0.84	0.28	0.08
11	DEPRECIATION - DE-MERGER AP RE-ORG ACT-2014 A/C		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			3,369.29	-2.78	118.68	3,366.51	3.38	116.91	3,369.89	-0.24	116.76	3,369.65	1.71	116.70	3,371.36	2.08	116.76

Prady
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Srisaillam Left Bank HES

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	5	6	7	8
I	Loan-1 (PFC)	11500.00					
	Gross loan - Opening	2133.46	10540.58	10540.58	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		8407.12	9473.85	0.00	0.00	0.00
	Net loan - Opening		2133.46	1066.73	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		1066.73	1066.73	0.00	0.00	0.00
	Net loan - Closing		1066.73	0.00	0.00	0.00	0.00
	Average Net Loan		1600.10	533.37	0.00	0.00	0.00
	Rate of Interest on Loan		12.50%	12.50%	12.50%	12.50%	12.50%
	Interest on loan		184.82	54.14	0.00	0.00	0.00

Jany
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company


TSGENCO

Name of the Power Station

SLBHES

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.40%	13.40%	13.40%	13.40%	13.40%
WACC ¹	2546.26	2429.08	2318.54	2204.63	2093.29
RoCE	341.20	325.50	310.69	295.42	280.50


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

**PART-I
FORM- 14**

Working Capital

Name of the Company TSGENCO
Name of the Power Station SLBHES

Sl. No.	Particulars	(Amount in Cr)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	O & M expenses	3.44	3.58	3.72	3.87	4.83
2	Maintenance Spares	48.35	50.25	52.29	54.39	56.56
3	Recievables	82.73	80.39	78.21	75.96	75.40
	Total Working Capital	134.52	134.22	134.22	134.22	136.79

July
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE-A16
Summary Sheet

FORM- 1

Name of the Company


TSGENCO

Name of the Power Station :

SMALL HYDEL STATIONS(54MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	4.00	4.01	4.00	3.94	3.91
1.2	Return on Capital Employed ¹	9.64	9.17	8.66	8.15	7.80
1.3	O & M Expenses	18.53	19.27	20.05	20.85	26.02
	Total	32.17	32.45	32.71	32.94	37.73


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Form 2&3

NAME OF COMPANY : TSGENCO

NAME OF POWER STATION : SMALL HYDELS

SALIENT FEATURES OF HYDROELECTRIC PROJECT

1. POCHAMPAD HYDRO ELECTRIC STATION

I. GENERAL

1. Location : Pochampad, Armoor Mandal, Nizambad Dist.,
(about 200 KM from Hyderabad.)
2. Category : Multi purpose (Irrigation & Power) utilising the
Irrigation discharges in to the Kakatiya Canal and
Saraswathi canal.
3. Capacity : 3 x 9 MW = 27 MW
4. River : Godvari
5. Dam : Sri Ram Sagar Project
6. No. of Units : 3 Nos.
7. Design Energy (in Mu) : 80 MU

II. HYDROLOGY:

1. Reservoir : Sri Ram Sagar
2. Catchment Area : 35, 425 Sq. Miles
3. Max. flood discharge : 16 Lakh Cusecs
4. Live Storage : 81.19 TMC Ft.
5. Gross Storage : 112.02 TMC Ft.
6. Dead Storage : 30.83 TMC Ft.
7. Generation per TMC : 1.38 MU
8. Design Head :
9. Gross head : 27 Ft.
10. Net Head :
11. Full Reservoir level (FRL) : 1091.00 Ft.
12. Min. Draw Down Level (MDDL) : 1064.00 Ft.
13. Tail Race water level for :
14. Design Disch. through Machine : 135 Cumecs

III. COMMISSIONING DETAILS

- Unit - 1 : 20th February' 1987
Unit - 2 : 22nd September' 1987
Unit - 3 : 28th March' 1988


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IV. TECHNICAL:

1. Turbine
 - a) Type : Vertical Kaplan
 - b) Make : BHEL, Bhopal
 - c) Net Head :
 - d) Rated Output : 14200 BHP
 - e) Max. Output :
 - f) Normal Speed : 250 RPM
 - g) Runway speed :
 - h) Disc. Through Machine :

1. Generator
 - a) Type : Synchronous
 - b) Make : BHEL
 - c) Rated Voltage : 11 KV
 - d) Rated Out put : 9 MW / 10.6 MVA
 - e) Current : 557 A
 - f) Speed :
 - g) Power Factor : 0.85 Lag

2. Generator Transformer
 - a) Make : BHEL
 - b) Capacity :
 - c) Voltage Ratio :

4. Transmission Line : 132 KV

2. SINGURU HYDRO ELECTRIC SCHEME

I. GENERAL

1. Location : Singuru Village, Andole (Tq.), Medak dist. About 100 KM from Hyderabad.
2. Category : Water Supply - Cum - Power (A joint project between Govt. of A.P and Govt. of Karnataka)
3. Capacity : 2 x 7.5 MW = 15 MW
4. River : Manjira
5. Dam : Singuru
6. No. of Units : 2 Nos.
7. Design Energy (in Mu) : 20 MU

II. HYDROLOGY:

1. Reservoir : Singuru
2. Catchment Area : 15, 910 Sq. Miles
3. Max. flood discharge : 7,80,000 Cusecs
4. Live Storage : 27.43 TMC Ft.
5. Gross Storage : 30.0 TMC Ft.
6. Dead Storage : 2.57 TMC Ft.

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- 7. Generation per TMC : 1.1 MU
- 8. Design Head : 18.29 Mts. (60 Ft)
- 9. Gross head Max./ Min : 21.79 Mts. / 13.80 Mts.
- 10. Net Head Max. / Min : 20.69 Mts. / 12.70 Mts.
- 11. Full Reservoir level (FRL) : 1718.00 Ft.
- 12. Min. Draw Down Level (MDDL) : 1699.00 Ft.
- 13. Tail Race water level for
 - Max Discharge : 504 Mts.
 - Min Discharge : 501.81 Mts.
- 14. Design Disch. through Machine :

III. COMMISSIONING DETAILS

- Unit - 1 : 6th December' 1999
- Unit - 2 : 13th March' 2000


IV. TECHNICAL:

- 1. Turbine
 - a) Type : Vertical Kaplan
 - b) Make : BHEL
 - c) Net Head : 20.69 Mts.
 - d) Rated Output : 7,815 KW
 - e) Normal Speed : 250 RPM
 - f) Runway speed : 575 RPM
 - g) Disc. Through Machine :

- 3. Generator
 - a) Type : Synchronous
 - b) Make : BHEL
 - c) Rated Voltage : 11 KV
 - d) Rated Out put : 7.5 MW
 - e) Current : 463 A
 - f) Speed :
 - g) Power Factor : 0.85 Lag

- 4. Generator Transformer
 - a) Make :
 - b) Capacity : 3 - Phase
 - c) Voltage Ratio : 11 / 132 KV

- 5. Transmission Line : 132 KV


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3. NIZAMSAGAR POWER HOUSE

PREAMBLE:-

Originally 3 units of 5 M.W capacity each were installed at Nizamsagar multipurpose project. Unit-3 suffered major damages to the Turbine parts in April 1968 and the APSE Board considered that it was not economical to repair the unit hence disposed off. Generation from this powerhouse is controlled as per irrigation requirements. The units were supplied and commissioned by M/s English Electric Co., U.K. in 1955 - '56.

I. GENERAL

1. Location	:	Nizamsagar Dam, Nizamabad (Dist)., T.S.
2. Category	:	Storage Reservoir Type
3. Existing Capacity	:	2 X 5 MW = 10 MW
4. Designed capacity	:	3 X 5 MW = 15 MW
5. River	:	Manjira
6. Dam	:	Nizamsagar Dam
7. No. of Units	:	2
8. Annual Energy Potential	:	20 MU

II. HYDROLOGY:

1. Reservoir	:	Nizamsagar
2. Gross Head	:	70.025 TMC Ft.
3. Dead Storage	:	0.84 TMC Ft.
4. Generation per TMC	:	1.00 MU
5. Rated Head	:	60 feet
6. Designed Max Gross Head	:	68 Ft.
7. Min Head	:	30 feet
8. Full Reservoir level (FRL)	:	1405 Ft.
9. Min Draw Down Level (MDDL)	:	1376 Ft.
10. Design Disch. through Machines:	:	2400 Cusecs
11. Reservoir Capacity at FRL 1405:	:	17.8 TMC

III. COMMISSIONING DETAILS:

UNIT NO.1	:	1954 - 55
UNIT No.2	:	1955-56

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V. TECHNICAL:

Turbine

Make : English Electric, U.K.
Type : Vertical Kaplan
Output : 7050 HP
Maximum Head : 66 feet
Min Head : 30 feet
Rated Head : 60 feet
Rated Discharge : 1200 Cusecs

Generator

a) Make : English Electric, U.K.
b) Rated Voltage : 11 KV
c) Power Factor : 0.8 Lagging
d) Rating : 5000 KVA

Generator Transformer

a) Make : English Electric, U.K.
b) Capacity : 6250 KVA
c) Voltage Ratio : 11 KV / 33 KV

Transmission Line : 33 KV

NOTE:-

1. Unit -III was damaged during 1968 - 69 subsequently the unit disposed off.
2. 66 KV Power evacuation systems was converted to 33 KV system during -2005. The generator transformer were converted from 11 KV/66 KV to 11 KV/33 KV.
3. 1 No. 6.25 MVA, 11 KV/66 KV Generator Transformer is available as spare. The same will be converted to 11 KV/33 KV after observing the performance of the existing 2 Nos. Generator Transformers of Unit-I and II, which were converted to 11 KV/33 KV.

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4.PALAIR HYDEL STATION (2X1000 KW)

PREAMBLE:-

The Palair Hydro Electric Scheme is located on Nagarjuna Sagar Left Canal (Lal Bahadur canal) at Mile 87/0. The Power House is situated on the down stream side of Palair reservoir and utilises the discharges from the reservoir at the out fall regulator. The design flow of water in the canal is 176 Cumecs. The canal bed level is +127.05M at the out fall regulator. Canal bed width is 28.34m and bed fall is 1 in 32925. The water velocity is 1.019M/Sec and full supply depth in the canal is 5.09M.

The salient features of the Dam and canal or detailed below:

1) LOCATION:

State : Telangana
District : Khammam.
Canal : N.S. Left Main Canal (Lal Bahadur Canal)
Site of the Power House : At M87/U of N.S. Left Canal. The site is beside the Hyderabad – Khammam Road at KM 153/0.


2) HYDROLOGY:

Source of Potential : Irrigation discharges from Palair reservoir through out fall regulator at M.87/0 of Lal Bahadur Canal.
No. of Canal drops available : Only one at M87/U of L.B. Canal.
Design flow of water in canal (for 11 months in a year) considered for power generation. : 176 Cumecs.

Canal will be closed for one month in a year i.e during the month of May. The Power plant generate power during the months from June to April in a year.

3) CANAL PARTICULARS:

Canal bed Level : +127.05M.(of N.S. Left Canal at out fall regulator)
Canal bed width : 28.34 Metres.
Bed fall : 1 in 32025 .
Water velocity : 1.019M/Sec.
Discharge : 176 Cumecs.
F.S.D : 5.09M.
F.S.L. : +132.15M.
Sill Level : +127.51


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4) **PALAIR RESERVOIR PARTICULARS:**

Free catchment	:	568.20 Sq. KM.
Max. height of bund	:	18.75 M.
Front slope of bund	:	3:1.
Rear Slope of bund	:	2:1.
Max. flood discharge computed	:	2345 Cumecs.
Discharge provided	:	2740 Cumecs.
Sill Level of Left Flank sluice (4vents of 6'x5')	:	+126.89M.
F.R.L.	:	+133.89M.
M.W.L.	:	+135.41 M.
T.B.L.	:	+136.94M.
Live capacity	:	65.91 M.Cum.

5) **COMMISSIONING DETAILS :-**

Unit -I	:	13.02.1993
Unit -II	:	03.03.1993

6) **TECHNICAL:-**

1. Turbine
 - a) Type : **Horizontal Tubuler (S-type) Semi - Kaplan**
 - b) Make : **M/s Boving Foures Ltd., Bangalore.**
 - c) Designed Head : **3.10 M**
 - d) Rated Output : **1075 KW**
 - e) Normal Speed : **125 RPM**
 - f) Runway speed : **350 RPM**
2. Generator
 - a) Type : **Induction Generator**
 - b) Make : **M/s Kirloskar Electric Company, Bangalore**
 - c) Rated Voltage : **3300 Volts**
 - d) Rated Out put : **1000 KW**
 - e) Speed : **1000 RPM**
3. Generator Transformer
 - a) Make : **TELK, Angamally, Kerela**
 - b) Capacity : **25 MVA, Single Phase (Out Door Type)**
 - c) Voltage Ratio : **11 KV/ 220 KV**
4. Gear Box Particulars
 - a) Type of gears : **Helical - Alloy case carborising steel**
 - b) Gear Ratio : **125/1000**
 - c) Bearing type : **Oil lubricated antifriction type.**
 - d) Lubrication : **Pressure oil lubrication at 1.5 kg/Cm2 provided with water cooled oil cooler and 2 pumps to re-circulated the oil.**

PART-I
FORM- 7

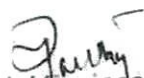
Details of Project Specific Loans

Name of the Company TSGENCO

Name of the Power Station SMALL HYDELS

(Amount in lacs)

Particulars 1	Package 1 2
Source of Loan ¹	
Currency ²	
Amount of Loan sanctioned	
Amount of Gross Loan drawn upto 31.03.2014/COD 3,4,5,13,15	
Interest Type ⁶	
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	
Margin, if Floating Interest ⁸	
Are there any Caps/Floor ⁹	
If above is yes,specify caps/floor	
Moratorium Period ¹⁰	
Moratorium effective from	
Repayment Period ¹¹	
Repayment effective from	
Repayment Frequency ¹²	
Repayment Instalment ^{13,14}	
Base Exchange Rate ¹⁶	


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PART-I
FORM- 11

Statement of Depreciation

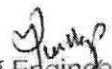
Name of the Company

TSGENCO

Name of the Power Station

SMALL HYDEL

Financial Year	Rs in Crs.				
	2014-15	2015-16	2016-17	2017-18	2018-19
1	3	4	5	6	7
Depreciation on Capital Cost	120.59	120.84	120.84	120.84	120.84
Depreciation recovered during the Year	4.00	4.01	4.00	3.94	3.91
Depreciation & Advance against Depreciation recovered during the year	4.00	4.01	4.00	3.94	3.91
Cumulative Depreciation & Advance against Depreciation recovered upto the year	62.04	66.05	70.05	73.99	77.90


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Depreciation*

Name of the Company TSGENCO
Name of the Power Station SMALL HYDELS

Rs in Cr

Sl. No.	Asset Name	Depreciation Rate as per MeP Depreciation rate schedule.	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00	0.26	0.00	0.00
2	LAND DEPOSITS	0.00%	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00
3	BUILDINGS	3.02%	17.32	0.00	0.57	17.32	0.00	0.57	17.32	0.00	0.57	17.32	-1.89	0.51	15.42	0.07	0.49
4	PLANT AND MACHINERY	3.40%	112.73	0.00	3.77	112.73	0.00	3.74	112.73	0.00	3.71	112.73	-6.25	3.44	106.48	0.00	3.43
5	HYDRAULIC WORKS	3.40%	15.08	0.29	0.48	15.37	0.00	0.49	15.37	0.00	0.49	15.37	-0.14	0.46	15.22	0.00	0.45
6	OTHER CIVIL WORKS	3.02%	10.93	0.00	0.33	10.93	0.00	0.32	10.93	0.00	0.32	10.93	0.00	0.32	10.93	0.00	0.32
7	FURNITURE AND FIXTURES	12.77%	0.22	0.00	0.02	0.22	0.00	0.01	0.22	0.06	0.01	0.27	0.04	0.02	0.31	0.19	0.04
8	VEHICLES	33.40%	0.21	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.00	0.21	0.00	0.00
9	COMPUTERS	33.40%	0.05	0.00	0.00	0.05	0.04	0.01	0.09	0.02	0.02	0.12	0.10	0.03	0.21	0.03	0.04
10	OFFICE EQUIPMENT	12.77%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
11	DEPRECIATION - DE-MERGER AP RE-ORG ACT-2014 A/C.		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			156.78	0.29	5.18	157.07	0.07	5.14	157.14	0.08	5.11	157.22	-8.14	4.78	149.08	0.29	4.78

*Note: 1. FY2017-18 negative additions are relating to transfer of PALAIR HES assets to PCHES.

2. Assets in Form -12 in respect of SMALL Hydels are submitted including Peddapally (Mini Hydel) and excluding PALAIR HES.

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PART-I
FORM- 13A

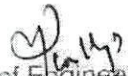
Name of the Company TSGENCO

Name of the Power Station SMALL HYDEL

(Amount in Crs)

Calculation of Return on Capital Employed

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.40%	13.40%	13.40%	13.40%	13.40%
WACC ¹	71.94	68.40	64.60	60.81	58.22
RoCE	9.64	9.17	8.66	8.15	7.80


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PART-I
FORM- 14

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

SMALLHYDEL (54MW)

(Amount in lacs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	5	6	7
1	O & M expenses	1.54	1.61	1.67	1.74	2.17
2	Maintenance Spares	2.48	2.59	2.69	2.80	2.91
3	Receivables	5.36	5.41	5.45	5.49	6.29
	Total Working Capital	9.39	9.60	9.81	10.02	11.37

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Annexure A17

FORM- 1

Summary Sheet

Name of the Company


TSGENCO

Name of the Power Station :

MINI HYDELS (9.16MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	0.03	0.03	0.90	0.89	0.89
1.2	Return on Capital Employed ¹	2.46	2.47	2.49	2.38	2.29
1.3	O & M Expenses	3.14	3.27	3.40	3.54	4.42
	Total	5.63	5.77	6.79	6.81	7.59


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MINI HYDEL STATIONS AT PEDDAPALLI, KARIMNAGAR (DIST)

I) 6th Mile:

CAPACITY : 2 X 500 KW
LOCATION : 6th mile MHS on D-83 Kakatiya canal at Peddapalli is situated at about 23 Km from Peddapalli town. The nearest railway station is Peddapalli railway broad gauge.
MAKE :
Turbine : M/s Triveni Engg., Industries Ltd, New Delhi
Generator : M/s Triveni Engg., Industries Ltd, New Delhi
HEAD : 4.40 Mts
DISCHARGE : 29 Cumecs
DESIGNED ENERGY : 4.888 MU
PROJECT COST IN LAKHS: 603
COMMISSIONING DATE :
UNIT I : 05.11.2003
UNIT II : 05.11.2003
GENERATION DURING THE YR 2003-04: 1.104762 MU

II) 7th Mile :

CAPACITY : 2 X 500 KW
LOCATION : 7th mile MHS on D-83 Kakatiya canal at Peddapalli is situated at about 21.5 Km from Peddapalli town. The nearest railway station is Peddapalli railway broad gauge.
MAKE :
Turbine : M/s Triveni Engg., Industries Ltd, New Delhi
Generator : M/s Triveni Engg., Industries Ltd, New Delhi
HEAD : 5.0 Mts
DISCHARGE : 25.5 Cumecs
DESIGNED ENERGY : 5.294 MU
PROJECT COST IN LAKHS: 603
COMMISSIONING DATE :
UNIT I : 01.01.2004
UNIT II : 01.01.2004
GENERATION DURING THE YR 2003-04: 0.241385 MU

III) 9th Mile :

CAPACITY : 2 X 500 KW
LOCATION : 9th mile Mini Hydel Station on D-83 Kakatiya canal at Peddapalli is situated at about 18 KM from Peddapalli town. The nearest railway station is Peddapalli railway station (South Central railway, Broad gauge).
MAKE :
Turbine : M/s Sulzer Flovel Ltd, Faridabad
Generator : M/s Sulzer Flovel Ltd, Faridabad
HEAD : 5.0 Mts
DISCHARGE : 24.1 Cumecs
DESIGNED ENERGY : 5.75 MU
PROJECT COST IN LAKHS : 249

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COMMISSIONING DATE :
UNIT I : 18.01.1994
UNIT II : 18.01.1994
GENERATION DURING THE YR 2003-04: 1.224150 MU

IV) 10th Mile :

CAPACITY : 3 X 220 KW
LOCATION : 10th mile Mini Hydel Station on D-83 Kakatiya canal at Peddapalli is situated at about 16 KM from Peddapalli town. The nearest railway station is Peddapalli railway station (South Central railway, Broad gauge)
MAKE :
Turbine : M/s Triveni Engg., Industries Ltd, New Delhi
Generator : M/s Triveni Engg., Industries Ltd, New Delhi
HEAD : 5.0 Mts
DISCHARGE : 24.1 Cumecs
DESIGNED ENERGY : 2.75 MU
PROJECT COST IN LAKHS: 140
COMMISSIONING DATE :
UNIT I : 31.03.1986
UNIT II : 04.08.1987
UNIT III : 03.08.1987
GENERATION DURING THE YR 2003-04: 0.638020 MU

V) 12th Mile :

CAPACITY : 2 X 325 KW
LOCATION : 12th mile MHS on D-83 Kakatiya canal at Peddapalli is situated at about 13.5 Km from Peddapalli town. The nearest railway station is Peddapalli railway broad gauge.
MAKE :
Turbine : M/s Triveni Engg., Industries Ltd, New Delhi
Generator : M/s Triveni Engg., Industries Ltd, New Delhi
HEAD : 3.3 Mts
DISCHARGE : 25.1 Cumecs
DESIGNED ENERGY : 3.687 MU
PROJECT COST IN LAKHS: 583
COMMISSIONING DATE :
UNIT I : 03.11.2003
UNIT II : 03.11.2003
GENERATION DURING THE YR 2003-04: 0.417462 MU

VI) 14th Mile:

CAPACITY : 2 X 500 KW
LOCATION : 14th mile Mini Hydel Station on D-83 Kakatiya canal at Peddapalli is situated at about 9 KM from Peddapalli town. The nearest railway station is Peddapalli railway station (South Central railway, Broad gauge)
MAKE :
Turbine : M/s M/s Sulzer Flovel Ltd, Faridabad
Generator : M/s Sulzer Flovel Ltd, Faridabad
HEAD : 5.0 Mts

DISCHARGE : 24.1 Cumecs
DESIGNED ENERGY : 5.72 MU
PROJECT COST IN LAKHS: 307.38
COMMISSIONING DATE :
UNIT I : 04.12.1995
UNIT II : 06.12.1995
GENERATION DURING THE YR 2003-04: 1.280350 MU

VII) 16th Mile:

CAPACITY : 2 X 500 KW
LOCATION : 16th mile Mini Hydel Station on D-83 Kakatiya canal at Peddapalli is situated at about 6.5 KM from Peddapalli town. The nearest railway station is Peddapalli railway station (South Central railway, Broad gauge)
MAKE :
Turbine : M/s Sulzer Flovel Ltd, Faridabad
Generator : M/s Sulzer Flovel Ltd, Faridabad
HEAD : 6.0 Mts
DISCHARGE : 24.1 Cumecs
DESIGNED ENERGY : 5.72 MU
PROJECT COST IN LAKHS: 276.22
COMMISSIONING DATE :
UNIT I : 28.02.2001
UNIT II : 08.01.2001
GENERATION DURING THE YR 2003-04: 1.390550 MU

VIII) 18th Mile (Old):

CAPACITY : 3 X 220 KW
LOCATION : 18th mile Mini Hydel Station (Old) on D-83 Kakatiya canal at Peddapalli is situated at about 3 KM from Peddapalli town. The nearest railway station is Peddapalli railway station (South Central railway, Broad gauge)
MAKE :
Turbine : M/s Sulzer Flovel Ltd, Faridabad
Generator : M/s Sulzer Flovel Ltd, Faridabad
HEAD : 2.75 Mts
DISCHARGE : 24.1 Cumecs
DESIGNED ENERGY : 3.11 MU
PROJECT COST IN LAKHS: 150
COMMISSIONING DATE :
UNIT I : 14.02.1988
UNIT II : 11.03.1988
UNIT III : 12.03.1988
GENERATION DURING THE YR 2003-04: 0.536275 MU

IX) 19th Mile:

CAPACITY : 3 X 230 KW
LOCATION : 19th mile MHS on D-83 Kakatiya canal at Peddapalli is situated at about 2 Km from Peddapalli town. The nearest railway station is Peddapalli railway broad gauge.
MAKE :
Turbine : M/s BHEL
Generator : M/s BHEL
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HEAD : 3.3 Mts
 DISCHARGE : 22.2 Cumecs
 DESIGNED ENERGY : 3.11 MU
 PROJECT COST IN LAKHS: 165
 COMMISSIONING DATE :
 UNIT I : 12.04.1987
 UNIT II : 11.08.1987
 UNIT III : 10.08.1987
 GENERATION DURING THE YR 2003-04: 0.990225 MU

X) 18th Mile (Newly Commissioned):

CAPACITY : 2 X 750 KW
 LOCATION : 18th mile MHS (Newly commissioned) on D-83 Kakatiya canal at Peddapalli is situated at about 3.5 Km from Peddapalli town. The nearest railway station is Peddapalli railway broad gauge.
 MAKE :
 Turbine : M/s VATECH
 Generator : M/s VATECH
 HEAD : 7.55 Mts
 DISCHARGE : 23.72 Cumecs
 DESIGNED ENERGY : 8.167 MU
 PROJECT COST IN LAKHS: 771.62
 COMMISSIONING DATE :
 UNIT I : 30.11.2004
 UNIT II : 30.11.2004

CANAL PARTICULARS:

Canal bed Level : +127.05M.(of N.S. Left Canal at out fall regulator)
 Canal bed width : 28.34 Metres.
 Bed fall : 1 in 32025
 Water velocity : 1.019M/Sec.
 Discharge : 176 Cumecs.
 F.S.D : 5.09M.
 F.S.L. : +132.15M.
 Sill Level : +127.51 M.

PALAIR RESERVOIR PARTICULARS:

Free catchment : 568.20 Sq. KM.
 Max. height of bund : 18.75 M.
 Front slope of bund : 3:1.
 Rear Slope of bund : 2:1.
 Max. flood discharge computed : 2345 Cumecs.
 Discharge provided : 2740 Cumecs.
 Sill Level of Left Flank sluice (4vents of 6'x5') : +126.89M.
 F.R.L. : +133.89M.
 M.W.L. : +135.41 M.
 T.B.L. : +136.94M.
 Live capacity : 65.91 M.Cum.

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

MINI HYDELS

(Amount in lacs)

Particulars 1	Package I 2
Source of Loan ¹	
Currency ²	
Amount of Loan sanctioned	
Amount of Gross Loan drawn upto 31.03.2004/COD ^{3,4,5,13,15}	
Interest Type ⁶	
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	
Margin, if Floating Interest ⁸	
Are there any Caps/Floor ⁹	
If above is yes, specify caps/floor	
Moratorium Period ¹⁰	
Moratorium effective from	
Repayment Period ¹¹	
Repayment effective from	
Repayment Frequency ¹²	
Repayment Instalment ^{13,14}	
Base Exchange Rate ¹⁶	

J. S. S.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Statement of Depreciation

Name of the Company

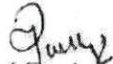
TSGENCO

Name of the Power Station

MINI HYDELS

(Amount Rs in Crs.)

Financial Year	Upto 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
Depreciation on Capital Cost	30.78	31.30	31.35	31.35	31.35	31.35
Depreciation recovered during the Year	0.98	0.03	0.03	0.90	0.89	0.89
Depreciation & Advance against Depreciation recovered during the year	0.98	0.03	0.03	0.90	0.89	0.89
Cumulative Depreciation & Advance against Depreciation recovered upto the year	14.58	14.61	14.64	15.54	16.43	17.32


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Calculation of Return on Capital Employed

Name of the Company

TSGENCO

Name of the Power Station

MINI HYDELS

(Amount in Crores)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.40%	13.40%	13.40%	13.40%	13.40%
WACC ¹	18.38	18.44	18.61	17.74	17.08
RoCE	2.46	2.47	2.49	2.38	2.29


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

**PART-I
FORM- 14**

Working Capital

Name of the Company

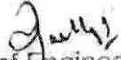
TSGENCO

Name of the Power Station

MINI HYDELS(9.16MW)

(Amount in Crs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	O & M expenses	0.26	0.27	0.28	0.30	0.37
2	Maintenance Spares	0.45	0.47	0.49	0.51	0.53
3	Recievables	0.94	0.96	1.13	1.13	1.27
	Total Working Capital	1.65	1.70	1.90	1.94	2.16


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE A18
Summary Sheet

FORM-1

Name of the Company


TSGENCO

Name of the Power Station :

Pochampad-II (9MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	1.00	1.00	1.00	1.00	1.00
1.2	Return on Capital Employed ¹	3.75	3.49	3.34	2.96	2.88
1.3	O & M Expenses	3.10	3.22	3.35	3.49	4.36
	Total	7.85	7.71	7.69	7.45	8.24


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

SALIENT FEATURES OF SRSP HPS Stage-II (1 x 9MW) TSGENCO, POCHAMPAD.

I. GENERAL:

- 1 Location : Lat N-18° 58', Long E-78° 20'
Pochampad, Balkonda Mandal,
Nizambad Dist., (about 200 KM from
Hyderabad).
- 2 Category : Multi purpose (Irrigation & Power)
utilising the irrigation discharges in to
the Kakatiya Canal.
- 3 River : Godavari
- 4 Dam : Sri Ram Sagar Project
- 5 Canal : Kakatiya Canal of length 284 kms.
- 6 No. of Units & Total Capacity : 1 Nos. Each 9MW
- 7 Design energy : 16.5MU

II HYDROLOGY:

- 1 Reservoir : Sri Ram Sagar Dam, Pochampad
- 2 Catchment Area : 35, 425 Sq.Miles
- 3 Max. flood discharge : 16 Lakh Cusecs
(9,09,000 cusecs on 19.09.1962)
- 4 Live Storage : 81.19 TMC
- 5 Gross Storage : 112.02 TMC
- 6 Dead Storage : 30.83 TMC
- 7 Generation per TMC : 1.38 MU
- 8 Design Head : 68.1 ft (20.75 mtrs)
- 9 Gross Head (Max/Min) : 75.2/41.2 ft (22.92/12.5 mtrs)
- 10 Max. waer level (MWL) : 1093.00 Ft (33.146 mtrs.)
- 11 Full Reservoir level (FRL) : 1091.00 FT (332.53 mtrs.)
- 12 Min. Draw Down Level (MDDL) : 1064.00 FT (324.3 mtrs.)
- 13 Tail Race water level for : + 1025.27 (312.5 mtrs.)
- 14 Design Dish. Through each : 1790 cusecs
- 15 Min. Tail Race Water level : 309.88 mtrs. (310.30 mtrs -5MW on 07.10.2003)

III FINANCIAL:

- 1 Estimated Cost :
- 2 Actual Cost : 28 Crores (Unit-IV)
- 3 Assistance : APSEB/OECF, JAPAN
- 4 Clearance by : CEA, MOE&F and PLG commission
GOI (03.01.1984)
- 5

IV COMMISSIONING DETAILS

- UNIT-4 : 12th October, 2010

J. V. S. S.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

V TECHNICAL:

1 Turbine

- a) Type : Vertical Kaplan
- b) Make : BHEL, Bhopal
- c) Rated Output : 9000 KW
- d) Max. Output : 10,600 KW
- e) Runaway Speed (on cam/off cam) : 500/610 rpm
- e) Normal Speed : 250 RPM
- f) Disc. Through Machine : 1790 Cusecs

PENSTOCK GATE TECHNICAL DATA

- Flow capacity: During Hoisting-30.5 Lt/min During closing - 305 Lt/min.
- a) Capacity : 70 Tones
- b) Stroke : 8100 mm
- c) Working pressure : 100 kg/cm²
- d) Test pressure : 150 kg/cm²
- e) Opening time : 20 Minutes
- d) Closing time : 2 minutes

2 Generator

- a) Type : Salient Pole, HGS 460/52-240
- b) Make : BHEL, Bhopal
- c) Rated Voltage : 11KV
- d) Rated Output : 9MW/10.6 MVA
- e) Current : 557 A
- f) Speed : 250 RPM
- g) Power Factor : 0.85 Lag

3 Generator Transformer

- a) Make : BHEL, Jhansi
- b) Capacity : 12.5MVA
- c) Voltage Ratio : 11/132KV
- : 132 KV Single circuit, from PH to 132KV Sub-Station at Pochampad

4 Transmission Line

5 Different Elevations

- Inspection gallery : 301.75m
- Drainage sump bottom : 298.40m
- Service bay & MCR : 314.00m
- Top of Power House : 326.20m
- Draft tube gate vent level : 313.90m
- Machine center line : 306.324m
- Penstock Gate top : 320.45m (1052.00 ft)
- Penstock Gate center line : 317.71m (1042.30 ft)
- Penstock Gate Bottom : 313.94m (1030.00 ft)

Jay
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION
CORPORATION LIMITED
Sri Ram Sagar HEP(Pochampad HES)

(Amount in lacs)

Particulars	Package1
1	2
Source of Loan ¹	Dhana laxmi Bank Ltd.,
Currency ²	Inidan Ruppe
Amount of Loan sanctioned	2289.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	2289.00
Interest Type ⁶	Fixed
Fixed Interest Rate, if applicable	12.50%
Base Rate, if Floating Interest ⁷	
Margin, if Floating Interest ⁸	NO
Are there any Caps/Floor ⁹	
If above is yes,specify caps/floor	
Moratorium Period ¹⁰	2years
Moratorium effective from	29.01.08
Repayment Period ¹¹	10 years
Repayment effective from	28.02.2010
Repayment Frequency ¹²	Monthly
Repayment Instalment ^{13,14}	120
Base Exchange Rate ¹⁶	Not Applicable

July
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 11

Statement of Depreciation


Name of the Company

TSGENCO

Name of the Power Station

POCHAMPAD-II

Financial Year	Rs in Croress					
	Upto 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	
Depreciation on Capital Cost	29.36	29.60	29.60	29.60	29.60	29.74
Depreciation recovered during the Year	1	1.00	1.00	1.00	1.00	1.00
Depreciation & Advance against Depreciation recovered during the year	1	1.00	1.00	1.00	1.00	1.00
Cumulative Depreciation & Advance against Depreciation recovered upto the year	3.24	4.24	5.24	6.24	7.24	8.24


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
POCHAMPAD-II

Rs in Cr

Sl No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule.	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	BUILDINGS	3.02%	3.67	0.00	0.12	3.67	0.00	0.12	3.67	0.00	0.12	3.67	0.00	0.12	3.67	0.00	0.12
2	PLANT AND MACHINERY	3.40%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	HYDRAULIC WORKS	3.40%	26.34	0.00	0.91	26.34	0.00	0.91	26.34	0.00	0.91	26.34	0.14	0.92	26.48	0.00	0.92
4	AP RE-ORG ACT-2014 A/C.		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			30.01	0.00	1.03	30.01	0.00	1.03	30.01	0.00	1.03	30.01	0.14	1.04	30.15	0.00	1.04

Jully
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Sri Ram Sagar HEP(Pochampad)

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	5	6	7	8	9
1	Loan-1 (Dhana Laxmi Bank Ltd.,	2289.00					
	Gross loan - Opening	1332.72	2289.00	2289.00	2289.00	2289.00	2289.00
	Cumulative repayments of Loans upto previous year		956.28	1187.33	1416.10	1649.03	2289.00
	Net loan - Opening		1332.72	1101.67	872.90	639.97	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		231.05	228.77	232.93	639.97	0.00
	Net loan - Closing		1101.67	872.90	639.97	0.00	0.00
	Average Net Loan		1217.20	987.29	756.44	319.99	0.00
	Rate of Interest on Loan		12.50%	11.50%	11.40%	10.10%	10.10%
	Interest on loan		151.34	115.13	87.15	24.70	0.00

Jany
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company TSGENCO
Name of the Power Station POCHAMPAD-II

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.30%	12.81%	12.71%	11.72%	11.72%
WACC ¹	28.24	27.23	26.25	25.24	24.59
RoCE	3.75	3.49	3.34	2.96	2.88

J. V. V.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I

FORM- 14

Working Capital

Name of the Company

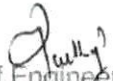
TSGENCO

Name of the Power Station

POCHAMPAD-II (9MW)

(Amount in Crs)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	O & M expenses	0.26	0.27	0.28	0.29	0.36
2	Maintenance Spares	0.31	0.32	0.33	0.35	0.36
3	Recievables	1.31	1.28	1.28	1.24	1.37
	Total Working Capital	1.88	1.87	1.89	1.88	2.10


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE -A19
Summary Sheet

FORM-1

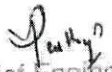
Name of the Company

TSGENCO

Name of the Power Station :

Priradarshini Jurala HES(6X39MW)

S.No.	Particulars	(Rs in Crs)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	22.79	22.79	22.79	22.79	22.79
1.2	Return on Capital Employed ¹	82.43	79.78	73.26	64.93	62.53
1.3	O & M Expenses	19.39	20.17	20.97	21.81	27.23
	Total	124.61	122.74	117.02	109.53	112.55


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Form 2 & 3

NAME OF COMPANY : TSGENCO

NAME OF POWER STATION : PRIYADARSHINI JURALA HYDRO ELECTRIC
PROJECT (6X39MW)

SALIENT FEATURES OF HYDROELECTRIC PROJECT

I. GENERAL

- | | |
|--------------------------|--|
| 1. Location | : Priyadarshini jurala hydro electric project ,Revulapally village , on River Krishna near Gadwal, Mahaboobnagar , District ,Telanagna ,India.(About 200Kms from Hyderabad) |
| 2. Category | : Hydro Power Project |
| 3. Capacity | : 6X39MW =234MW |
| 4. River | : Krishna |
| 5. Dam | : Jurala |
| 6. No. of Units | : 6 |
| 7. Design Energy (in Mu) | : 220 MU |

II. HYDROLOGY:

- | | |
|-----------------------------------|--------------------------------|
| 1. Reservoir | : Jurala |
| 2. Catchment Area | : 129499 Sq.km |
| 3. Max. flood discharge | : 42500 Cusecs |
| 4. Live Storage | : 192.27 M.Cum |
| 5. Gross Storage | : 338.10 M.Cum(9.657TMC) |
| 6. Dead Storage | : 145.83 M.Cum |
| 7. Generation per TMC | : 1.27 MU |
| 8. Design Head (Max/Min) | : 18 M |
| 9. Max. gross head | : 21.92/18.12 M |
| 10. Net Head average | : 19.62 M |
| 11. Full Reservoir level (FRL) | : 318.516 M |
| 12. Min. Draw Down Level (MDDL) | : 314.860 M |
| 13. Tail Race water level (Max) | : 299.60 M |
| 14. Design Disch. through Machine | : 240 m3/sec(Design discharge) |

III. COMMISSIONING DETAILS

- | | |
|----------|--------------|
| Unit - 1 | : 28.03.2008 |
| Unit - 2 | : 31.08.2008 |
| Unit - 3 | : 28.05.2009 |
| Unit - 4 | : 20.08.2010 |
| Unit - 5 | : 09.11.2010 |
| Unit - 6 | : 09.06.2011 |

Jully
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

IV. TECHNICAL :

1. Turbine

- a) Type : **Bulb Turbine**
- b) Make : **M/s. Hitach**
- c) Net Head : **18.00 M**
- d) Rated Output : **39 MW**
- e) Normal Speed : **100 RPM**
- f) Runway speed : **282 RPM**
- g) **Specific speed** : **536.7 RPM**
- h) Disc. Through Machine : **240 m3/s**

1. Generator

- a) Type : **Bulb Generator**
- b) Make : **M/s HEC**
- c) Rated Voltage : **11 KV**
- d) Rated Out put : **39MW**
- e) Current : **2720 A**
- f) Speed : **100 RPM**
- g) Power Factor : **0.9 Lag**

2. Generator Transformer

- a) Make : **Xianxd Transformer Company Ltd., China**
- b) Capacity : **50 MVA**
- c) Voltage Ratio : **11 KV / 220 KV**

4. Transmission Line

- : **2+2= 4 feeders**
- (2 FOR TSTRANSCO & 2 FOR GOK)**
- No. of circuits & Voltage rating KV: 4& 220KV.**


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Details of Project Specific Loans


**PART-I
FORM- 7**

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION
CORPORATION LIMITED
Priyadarshini Jurala HEP

(Rs in lacs)

Particulars	Package1	Package2
	2	3
Source of Loan ¹	PFC Ltd.,	SBH
Currency ²	Inidan Ruppe	Inidan Ruppe
Amount of Loan sanctioned	43800.00	10000.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	41221.00	6643.00
Interest Type ⁶	Floating	Floating
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷		Base Rate
Margin, if Floating Interest ⁸	NO	NO
Are there any Caps/Floor ⁹		Yes
If above is yes,specify caps/floor		1.55%
Moratorium Period ¹⁰	4 years	1.5 years
Moratorium effective from	06.10.04	01.07.08
Repayment Period ¹¹	15 years	9 years
Repayment effective from	15.07.09	30.06.10
Repayment Frequency ¹²	Quarterly	Quarterly
Repayment Instalment ^{13,14}	60	36
Base Exchange Rate ¹⁶	Not Applicable	Not Applicable


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

ANNEXURE -A19

PART-I
FORM- 11

Statement of Depreciation

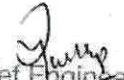
Name of the Company

TSGENCO

Name of the Power Station

Priradarshini Jurala HES(6X39MW)

Financial Year	Upto 2013-14	2014-15	2015-16	2016-17	2017-18	Rs in Cr 2018-19
1	4	5	6	7	8	
Depreciation on Capital Cost	670.15	687.11	687.73	688.91	688.91	689.79
Depreciation recovered during the Year	22.79	22.79	22.79	22.79	22.79	22.79
Depreciation & Advance against Depreciation recovered during the year	22.79	22.79	22.79	22.79	22.79	22.79
Cumulative Depreciation & Advance against Depreciation recovered upto the year	89.68	112.47	135.26	158.05	180.84	203.63


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE -A19

FORM-1

Name of the Company
Name of the Power Station

TSGENCO
PJHES

Rs in Cr

Sl No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule.	2014-15			2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2014 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.35	0.00	0.00	0.35	0.00	0.00	0.35	0.00	0.00	0.35	0.00	0.00	0.35	0.00	0.00
2	BUILDINGS	3.02%	212.46	0.00	7.19	212.46	0.00	7.19	212.46	0.00	7.19	212.46	0.00	7.19	212.46	0.41	7.20
3	PLANT AND MACHINERY	3.40%	462.34	0.62	18.04	462.96	1.19	18.06	464.15	-0.20	18.13	463.95	0.16	17.97	464.11	1.28	17.99
4	HYDRAULIC WORKS	3.40%	1.14	0.00	0.04	1.14	0.00	0.04	1.14	0.00	0.04	1.14	0.00	0.04	1.14	0.00	0.04
5	OTHER CIVIL WORKS	3.02%	0.72	0.18	0.05	0.90	0.08	0.05	0.98	0.00	0.05	0.98	0.10	0.03	1.08	0.43	0.03
6	FURNITURE AND FIXTURES	12.77%	0.41	0.00	0.02	0.41	0.00	0.02	0.41	0.02	0.02	0.43	0.06	0.03	0.49	0.00	0.02
7	VEHICLES	33.40%	0.06	0.00	0.00	0.06	0.30	0.06	0.36	0.00	0.10	0.36	0.00	0.09	0.36	0.00	0.02
8	COMPUTERS	33.40%	0.31	0.00	0.04	0.32	0.00	0.01	0.32	0.00	0.00	0.32	0.04	0.01	0.36	0.01	0.02
9	CAPITAL SPARES	3.40%	24.95	0.00	0.85	24.95	0.00	0.85	24.95	0.00	0.85	24.95	0.00	0.85	24.95	0.00	0.85
10	OFFICE EQUIPMENT	12.77%	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.04	0.01	0.06	0.01	0.02	0.07	0.07	0.02
11	DEPRECIATION - DEMERGER AP RE-ORG ACT- 2014 A/C.		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			702.76	0.81	26.24	703.56	1.59	26.28	705.16	-0.14	26.38	705.02	0.37	26.23	705.38	2.21	26.19

P. V. S.
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Calculation of Weighted Average Rate of Interest on Actual Loans¹Name of the Company
Name of the Power StationTELANGANA STATE POWER GENERATION CORPORATION LIMITED
Priyadarshini Jurala HEP

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	5	6	7	8
1	Loan-1 (PFC)	43800.00					
	Gross loan - Opening	28421.48	41221.00	41221.00	41221.00	41221.00	41221.00
	Cumulative repayments of Loans upto previous year		12799.52	15572.34	18345.17	21359.46	24163.44
	Net loan - Opening		28421.48	25648.66	22875.83	19861.54	17057.56
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		2772.82	2772.83	3014.29	2803.98	2803.98
	Net loan - Closing		25648.66	22875.83	19861.54	17057.56	14253.58
	Average Net Loan		27035.07	24262.25	21368.69	18459.55	15655.57
	Rate of Interest on Loan		12.50%	12.50%	12.50%	10.20%	10.20%
	Interest on loan		3282.71	2950.72	2419.31	1836.34	1557.41
2	Loan (State Bank of Hyderabad)	10000.00					
	Gross loan - Opening	2184.21	6643.00	6643.00	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		4458.79	5571.93	0.00	0.00	0.00
	Net loan - Opening		2184.21	1071.07	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		1113.14	1071.07	0.00	0.00	0.00
	Net loan - Closing		1071.07	0.00	0.00	0.00	0.00
	Average Net Loan		1627.64	535.54	0.00	0.00	0.00
	Rate of Interest on Loan		11.75%	11.60%			
	Interest on loan		206.58	74.88			

[Signature]
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Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station Priradarshini Jurala HES(6X39MW)

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	13.15%	13.19%	12.57%	11.62%	11.62%
WACC ¹	626.96	604.83	582.65	558.99	538.36
RoCE	82.43	79.78	73.26	64.93	62.53


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

ANNEXURE -A19

FORM- I
Working Capital

PART-I
FORM- 14

Name of the Company

TSGENCO

Name of the Power Station

Priradarshini Jurala HES(6X39MW)

(Amount in Cr)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	O & M expenses	1.62	1.68	1.75	1.82	2.27
2	Maintenance Spares	7.14	7.44	7.75	8.06	8.39
3	Recievables	20.77	20.46	19.50	18.25	18.76
	Total Working Capital	29.53	29.57	29.00	28.13	29.41

Jully
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE-A20
Summary Sheet

FORM-1

Name of the Company
Name of the Power Station :

TSGENCO
Lower Jurala HES(6X40MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	0.00	21.29	58.65	66.95	66.95
1.2	Return on Capital Employed ¹	0.00	74.43	147.34	178.17	170.86
1.3	O & M Expenses	0.00	9.66	21.11	28.88	36.04
	Total	0	105.38	227.10	274.00	273.85

Note: Fixed charges in respect of LJIHES considered from the COD of the units: Unit I-19.10.2015, Unit II-05.10.2015, Unit III-28.07.2016, Unit IV-28.07.2016, Unit V-20.08.2016 & Unit VI-01.10.2016


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Form 2 & 3

NAME OF COMPANY : TSGENCO

NAME OF POWER STATION : LOWER JURALA HYDRO ELECTRIC SCHEME(6X40MW)

SALIENT FEATURES OF HYDROELECTRIC PROJECT


1. LOWER JURALA HYDRO ELECTRIC SCHEME

I. GENERAL

- | | |
|----------------------|---|
| 1. Location | : About 7.9km downstream of existing Priyadarshini JuralaProj near village Boundaries of Mulamalla, Atmakur Mandal, Mahaboobnagar Dist. |
| 2. Category | : Hydro Electric Project |
| 3. Capacity | : 6x40 MW |
| 4. Designed capacity | : 240 MW |
| 5. River | : Krishna |
| 6. Dam | : Weir |
| 7. No. of Units | : 6 |
| 8. Design Energy | : 522.48 MU |

II. HYDROLOGY:

- | | |
|------------------------------------|--------------------------|
| 1. Reservoir | : - |
| 2. Catchment Area | : 1.30,768 Sq.km |
| 3. Max. flood discharge | : 36,016 cumec |
| 4. Live Storage | : 0.3 TMC |
| 5. Gross Storage | : 0.5 TMC |
| 6. Dead Storage | : - |
| 7. Generation per TMC | : |
| 8. Design Head | : 20 M |
| 9. Net Head Max /Min. | : 25.6/16.0 M |
| 10. Rated Net Head | : 20.0 M |
| 11. Full Reservoir level (FRL) | : 299 M |
| 12. Min. Draw Down Level (MDDL): | 294 M |
| 13. Tail Race water level (Max) | : 272 M |
| 14. Rated machine output | : 40.8 MW |
| 15. Maximum output | : 44.88 MW |
| 14. Design Disch. through Machine: | 218.75 m ³ /s |


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TSGENCO, V.S., Hyderabad-82

III. FINANCIAL:

- | | |
|-------------------------------|------------------------------------|
| 1. Initial Project Cost | : Rs. 908.34 Crores |
| 2. Latest Revised Cost | : Rs1969.14 Crores |
| 3. Expenditure upto July 2016 | : 1796.425 Crores as on 31.08.2016 |
| 4. Assistance | : TSGENCO |
| 5. Clearance by | : CEA, MOEF |
| 6. Cost of KW installed | : - |
| 7. Cost of gen. per unit | : Rs.2.46/unit |

IV Status of Units

- UNITS# 1 to 6 are commissioned and are available for operation.

COD of Units:

- | | |
|--------|--------------|
| Unit#1 | : 19.10.2015 |
| Unit#2 | : 05.10.2015 |
| Unit#3 | : 28.07.2016 |
| Unit#4 | : 28.07.2016 |
| Unit#5 | : 20.08.2016 |
| Unit#6 | : 01.10.2016 |

Station COD Declared on 01.10.2016 (6X40MW).


V. TECHNICAL:

1. Turbine

- | | | |
|--------------------------|---|--------------------------------|
| a) Type | : | Bulb Tubine |
| b) Make | : | M/s. Alstom Projects India Ltd |
| c) Net Head | : | 20.0 Mts |
| d) Rated Output | : | 40.8 MW |
| e) Normal Speed | : | 125 rpm |
| f) Runway speed | : | < 375 rpm |
| g) Disc. Through Machine | : | 218.75m ³ /s |

2. Generator

- | | | |
|------------------|---|--------------------------------|
| a) Type | : | Bulb Generator |
| b) Make | : | M/s. Alstom Projects India Ltd |
| c) Rated Voltage | : | 11 KV |
| d) Rated Output | : | 40 MW |
| e) Current | : | 2333 A |
| f) Speed | : | 125 RPM |
| g) Power Factor | : | 0.9 |



Chief Engineer
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TSGENCO, V.S., Hyderabad-82

3. Generator Transformer

- a) Make : M/s. Vijai Electricals Ltd
- b) Capacity : 50MVA
- c) Voltage Ratio : 11/ 220 KV

4. Transmission Line

- : 4 Feeders
- No of circuits & Voltage rating KV : 4 & 220KV
- 1 Feeder to Weltur-2.9 Km
- 3 Feeders to Jurala -18.5 Km (5+5+8.5 Km)


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Coal & Commercial
TSGENCO, V.S., Hyderabad-82

**PART-I
FORM- 7****Name of the Company**
Name of the Power StationTELANGANA STATE POWER GENERATION
CORPORATION LIMITED
Lower Jurala HEP

(Rs in lacs)

Particulars	Package1	Package2
1	2	3
Source of Loan ¹	PFC Ltd.,	SBH
Currency ²	Inidan Ruppe	Inidan Ruppe
Amount of Loan sanctioned	152979.00	15000.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	94854.91	15000.00
Interest Type ⁶	Floating	Floating
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷		Base Rate
Margin, if Floating Interest ⁸		
Are there any Caps/Floor ⁹	NO	Yes
If above is yes, specify caps/floor		1.55%
Moratorium Period ¹⁰	8 years	2.5 years
Moratorium effective from	08.07.08	15.04.09
Repayment Period ¹¹	20 years	10 Years
Repayment effective from	15.04.17	30.06.11
Repayment Frequency ¹²	Quarterly	Quarterly
Repayment Instalment ^{13,14}	80	40
Base Exchange Rate ¹⁶	Not Applicable	Not Applicable


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

Name of the Power Station

Lower Jurala HES(6X40MW)

Financial Year 1	Rs in Crs				
	2014-15 5	2015-16 6	2016-17 7	2017-18 8	2018-19
Depreciation on Capital Cost	0.00	1141.99	1515.33	1542.75	1549.18
Depreciation recovered during the Year	0.00	21.29	58.65	66.95	66.95
Depreciation & Advance against Depreciation recovered during the year	0.00	21.29	58.65	66.95	66.95
Cumulative Depreciation & Advance against Depreciation recovered upto the year	0.00	21.29	79.94	146.89	213.84

P. V. S. R.
Chief Engineer
Coal & Commercial
TSGENCO. V.S., Hyderabad-82

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
LJHES

Rs in Cr

Sl. No	Asset Name	Depreciation Rate as per MoP Deprecation rate schedule.	2015-16			2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2015 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.00	5.19	0.00	5.19	0.00	0.00	5.19	0.00	0.00	5.19	0.00	0.00
2	BUILDINGS	3.02%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.71	0.00	25.71	1.61	0.78
3	PLANT AND MACHINERY	3.40%	0.00	385.04	6.71	385.04	426.72	21.77	811.75	2.23	27.97	813.98	1.26	28.07
4	HYDRAULIC WORKS	3.40%	0.00	238.33	2.42	238.33	0.42	4.83	238.74	0.51	4.84	239.25	0.52	4.86
5	OTHER CIVIL WORKS	3.02%	0.00	702.89	10.61	702.89	49.18	21.61	752.06	-22.12	22.71	729.94	3.23	22.12
6	FURNITURE AND FIXTUR	12.77%	0.00	0.18	0.00	0.18	0.00	0.01	0.18	0.03	0.01	0.21	0.03	0.01
7	VEHICLES	33.40%	0.00	0.08	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00
8	COMPUTERS	33.40%	0.00	0.14	0.00	0.14	0.00	0.00	0.14	0.03	0.00	0.16	0.01	0.01
10	OFFICE EQUIPMENT	12.77%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.08	0.06	0.01
				1,331.83	19.74	1,331.83	476.31	48.23	1,808.14	6.46	55.55	1,814.61	6.72	55.86

[Signature]
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Lower Jurala HEP

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	5	6	7	8
1	Loan-I (PFC)	117281.00					
	Gross loan - Opening	94854.92	94854.92	115286.28	117278.34	117278.34	117278.34
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	5863.91
	Net loan - Opening		94854.92	115286.28	117278.34	117278.34	111414.43
	Add: Drawal(s) during the Year		20431.36	1992.06	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		0.00	0.00	0.00	5863.91	5863.91
	Net loan - Closing		115286.28	117278.34	117278.34	111414.43	105550.52
	Average Net Loan		105070.60	116282.31	117278.34	114346.39	108482.48
	Rate of Interest on Loan		12.50%	12.50%	12.50%	10.20%	10.20%
	Interest on loan		12982.35	14392.39	13424.30	11376.66	10793.34
2	Loan (State Bank of Hyderabad)	15000.00					
	Gross loan - Opening	10433.24	15000.00	15000.00	15000.00	15000.00	15000.00
	Cumulative repayments of Loans upto previous year		4566.76	6068.82	7573.50	9075.05	10579.25
	Net loan - Opening		10433.24	8931.18	7426.50	5924.95	4420.75
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		1502.06	1504.68	1501.55	1504.20	1527.58
	Net loan - Closing		8931.18	7426.50	5924.95	4420.75	2893.17
	Average Net Loan		9682.21	8178.84	6675.73	5172.85	3656.96
	Rate of Interest on Loan		11.75%	11.60%	11.60%	11.25%	10.95%
	Interest on loan		1157.71	959.22	773.11	599.20	403.35

Dr. J. V. S. Rao
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Calculation of Return on Capital Employed


Name of the Company **TSGENCO**
Name of the Power Station **Lower Jurala HES(6X40MW)**

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	0.00%	13.28%	12.67%	11.66%	11.64%
WACC ¹	0.00	1192.50	1563.01	1527.56	1468.35
*RoCE(100%)	0.00	74.43	147.34	178.17	170.86

Note:RoCE in respect of LJHES considered from the COD of the units:

Unit I-19.10.2015, Unit II-05.10.2015, Unit III-28.07.2016, Unit IV-28.07.2016, Unit V-20.08.2016 & UnitVI-01.10.2016



Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 14

Working Capital

Name of the Company TSGENCO
Name of the Power Station Lower Jurala HES(6X40MW)

Sl. No.	Particulars	(Amount in Cr)				
		2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	O & M expenses	0.00	1.71	2.36	2.41	3.00
2	Maintenance Spares	0.00	11.42	15.76	16.67	17.41
3	Recievables	0.00	37.37	50.85	45.67	45.64
	*Total Working Capital	0.00	50.51	68.98	64.75	66.05


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

ANNEXURE-A21
Summary Sheet

FORM- 1

Name of the Company
Name of the Power Station :

TSGENCO
PULICHINTALA HES(4X30MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	0.00	0.00	2.71	11.44	17.06
1.2	Return on Capital Employed ¹	0.00	0.00	14.86	29.02	49.85
1.3	O & M Expenses	0.00	0.00	2.06	4.19	8.85
	Total	0	0.00	19.63	44.65	75.76

Note :Fixed charges in respect of PCHES considered from the COD of the units: Unit 1: 29.09.2016 Unit-2:26.10.2017
Unit-3:01.11.2017 Unit-4:08.09.2018


 Chief Engineer
 Crai & Commercial
 TSGENCO, V.S., Hyderabad-82

NAME OF COMPANY : TSGENCO

NAME OF POWER STATION : PULICHINTALA HYDRO ELECTRIC SCHEME (4X30MW)

SALIENT FEATURES OF HYDROELECTRIC PROJECT**1. PULICHINTALA HYDRO ELECTRIC SCHEME****1. General Data:**

Location of Dam site : Latitude : 16 - 46' - 14" N.
 Longitude : 80 - 03' - 33" E.

The proposed dam site is located across the River Krishna, about 90 Kms(56 miles) downstream of Nagarjunasagar Dam and 83 Kms (52 miles) upstream of Prakasam Barrage at Vijayawada, Near Pulichintala Village, Telangana.

2. Hydrology:

i) Catchment area at Dam site : 2,40,732 Sq. Kms. (92,947 Sq. Miles)
 ii) Mean annual rain fall in the Water shed (Jun - Oct) : 670.30mm
 iii) Maximum flood level on downstream side : +52.00M.

3. Dam and Reservoir (I & CAD):

i) Full Reservoir Level : +53.34 M.
 ii) Lowest bed level of river : +23.30 M.
 iii) Total length of dam
 a) Earth Dam in Left Flank : 355.00M
 b) NOF dam in left flank : 99.00M
 c) Power dam in left flank : 112.00M
 d) Spillway : 560.25 M.
 e) NOF dam in right flank : 141.00M
 iv) Spillway discharging capacity : 57654 Cumecs (20.34 lakh cusecs)
 v) Minimum draw down level (MDDL) : +42.67 M.
 vi) Capacity at F.R. L : 1155 M. Cum (40.776 TMC)
 vii) Capacity at MDDL : 172 M. Cum (6.060 TMC)
 viii) Live storage between MDDL and FRL : 983 M. Cum (34.730 TMC)
 ix) Tail race level : 24.72M with one unit in service
 27.95M with 4 units in service

4. Power House:

i) Power potential : 120MW
 ii) Installed capacity : 4 Nos. of 30 MWs each.
 Vertical Kaplan turbine Generators
 iii) Annual Energy :
 a. At 90% dependable Year (1985-86) : 219.49MU

iv) Available Heads for generation

- a. Maximum head : 27.68M
 b. Rated Head : 24.00M
 c. Minimum Head : 12.00M

v) Machine Discharge :
 Discharge (m³/sec.) through each turbine for above conditions

		at guide vane opening		
		100%	80%	60%
i)	27.68 m head	--	129.13	86.84
ii)	24.00 m head	156.54 (5528 Cu.ft/sec)	114.03 (4027 Cu.ft/Sec)	72.56 (2562 Cu.ft/Sec)
iii)	12.00 m head	84.27	59.2	--

Vi) Generator Efficiency (%) at 100%, 80%, 60% and 110% of output (The windage friction loss by the integral parts of generator is included).

- a) 0.9 P.F.
 i) 100% : 97.94%
 ii) 80% : 97.88%
 iii) 60% : 97.66%
 iv) 110% : 97.94%
- b) Unity P.F.
 i) 100% : 98.29%
 ii) 80% : 98.23%
 iii) 60% : 98.03%
 iv) 110% : 98.29%

TECHNICAL:

1. Turbine

- a) Type : Vertical-KAPLAN
 b) Make : BHEL
 c) Net Head : 24 Mts.
 d) Rated Output : 30.93 MW
 e) Max. Output : 34.02 MW
 f) Normal Speed : 125 RPM
 g) Runway speed : 357 RPM
 g) Disc. Through Machine : 156.513 Cumecs/sec

2. Generator

- a) Type : Synchronous
 b) Make : BHEL
 c) Rated Voltage : 11 KV
 d) Rated Out put : 30 MW
 e) Current : 1749.6 A
 f) Speed : 125 RPM
 g) Power Factor : 0.9 Lagging

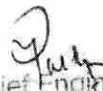
3. Generator Transformer

- a) Make : BHEL
b) Capacity : 40 MVA
c) Voltage Ratio : 11/ 220 KV

4. Transmission Line : 220 KV

II) Date of Commissioning (Unit wise)

- 1st Unit - 29.09.2016
2nd Unit - 26.10.2017
3rd Unit - 01.11.2017
4th Unit - 08.09.2018


Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

Details of Project Specific Loans

PART-I

FORM- 7

Name of the Company TELANGANA STATE POWER
 GENERATION CORPORATION
 LIMITED

Name of the Power Station Pulichintala HES

(Amount in lacs)

Particulars 1	Package1 2
Source of Loan ¹	IOB
Currency ²	Inidan Ruppe
Amount of Loan sanctioned	32500.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	17627.00
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	Base Rate
Margin, if Floating Interest ⁸	
Are there any Caps/Floor ⁹	Yes
If above is yes,specify caps/floor	1.50%
Moratorium Period ¹⁰	4 years
Moratorium effective from	28.01.08
Repayment Period ¹¹	10 years
Repayment effective from	30.04.12
Repayment Frequency ¹²	Quarterly
Repayment Instalment ^{13,14}	40
Base Exchange Rate ¹⁶	Not Applicable


 Chief Engineer
 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

PULICHINTALA HES(4X30MW)

Financial Year	Amount in Crs.					
	Upto 2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1	4	5	6	7	8	
Depreciation on Capital Cost	0	0.00	0.00	226.98	364.48	442.63
Depreciation recovered during the Year	0	0.00	0.00	2.71	11.44	17.06
Depreciation & Advance against Depreciation recovered during the year	0	0.00	0.00	2.71	11.44	17.06
Cumulative Depreciation & Advance against Depreciation recovered upto the year	0	0.00	0.00	2.71	14.15	31.21

July
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TSGENCO, V.S., Hyderabad-82

Depreciation*

Name of the Company TSGENCO
Name of the Power Station PCHES

Rs. in Cr

Sl.No	Asset Name	Depreciation Rate as per MoP Deprecation rate shedule.	2016-17			2017-18			2018-19		
			Gross Block as on 01.04.2016 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2017 or as on COD whichever is later	Additions	Depreciation amount	Gross Block as on 01.04.2018 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.00	0.00	0.00	0.00	0.78	0.00	0.78	0.00	0.00
2	BUILDINGS	3.02%	0.00	0.00	0.00	0.00	2.06	0.06	2.06	2.47	0.07
3	PLANT AND MACHINERY	3.40%	0.00	92.39	1.61	92.39	128.04	5.16	220.43	85.47	9.28
4	HYDRAULIC WORKS	3.40%	0.00	0.47	0.01	0.47	1.44	0.04	1.91	1.11	0.09
5	OTHER CIVIL WORKS	3.02%	0.00	180.57	2.73	180.57	11.08	5.56	191.65	9.10	5.99
6	FURNITURE AND FIXTURES	12.77%	0.00	0.14	0.01	0.14	0.28	0.02	0.42	0.18	0.05
7	VEHICLES	33.40%	0.00	0.00	0.00	0.00	0.68	0.00	0.68	0.00	0.00
8	COMPUTERS	33.40%	0.00	0.00	0.00	0.00	0.19	0.01	0.20	0.01	0.02
10	OFFICE EQUIPMENT	12.77%	0.00	0.01	0.00	0.01	0.15	0.01	0.16	0.01	0.03
			0.00	273.59	4.35	273.59	144.69	10.86	418.28	98.35	15.53

*Note: . FY2017-18 additions include transfer of PALAIR HES assets to PCHES.

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FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Pulichintala HEP

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	6	7	8	9
1	Loan-1 (Indian Overseas Bank)	32500.00					
	Gross loan - Opening	11327.33	17837.00	17837.00	17837.00	17837.00	0.00
	Cumulative repayments of Loans upto previous year		6509.67	9763.53	13017.14	16273.25	0.00
	Net loan - Opening		11327.33	8073.47	4819.86	1563.75	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		3253.86	3253.61	3256.11	1563.75	0.00
	Net loan - Closing		8073.47	4819.86	1563.75	0.00	0.00
	Average Net Loan		9700.40	6446.67	3191.81	781.87	0.00
	Rate of Interest on Loan		11.75%	11.55%	11.20%	11.20%	11.20%
	Interest on loan		1,124.56	724.79	337.03	34.16	0.00

[Signature]
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PART-I
FORM- 13A

Calculation of Return on Capital Employed


Name of the Company TSGENCO

Name of the Power Station PULICHINTALA HES(4X30MW)

(Amount in Cr)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	0.00%	0.00%	12.49%	12.49%	12.49%
WACC ¹	0.00	0.00	236.08	378.00	448.25
RoCE			14.86	29.02	49.85

Note:RoCE in respect of PCHES considered from the COD of the units: Unit 1: 29.09.2016 Unit-2:26.10.2017 Unit-3:01.11.2017
Unit-4:08.09.2018


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PART-I
FORM- 14

Working Capital

Name of the Company TSGENCO
Name of the Power Station PULICHINTALA HES(4X30MW)

(Amount in Cr)

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	O & M expenses	0.00	0.00	0.34	0.57	0.83
2	Maintenance Spares	0.00	0.00	2.27	3.79	4.76
3	Recievables	0.00	0.00	6.49	11.87	14.18
	Total Working Capital	0.00	0.00	9.10	16.23	19.76


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TSGENCO, V.S., Hyderabad-82

Abstract of admitted capital cost for the existing stations:

Name of the company:

TSGENCO

Capital cost as admitted by erstwhile APERC

TSERC Order dated 05.06.2017 in OP 26 of 2016

Capital cost of GPA Admitted:

SL.No	Name of the Station	Capacity MW	Approved GFA	(Rs.in Crs)
Thermal Stations				
1	KTPS O&M	720.00	31.03.2016	1287.64
2	KTPS-V	500.00	31.03.2016	2129.31
3	KTPS VI	500.00	31.03.2016	2398.82
4	RTS -B	62.50	31.03.2016	92.74
5	KTPP-I	500.00	31.03.2016	2559.68
6	KTPP Stage -II	600.00	31.03.2016	3039.35
7	Nagarjuna Complex	875.60	31.03.2016	1097.41
8	Srisailem LBHES	900.00	31.03.2016	3376.06
9	Small Hydel(Pochampad -I ,Singur , Nizam sagar & Palair HES)	54.00	31.03.2016	120.84
10	Mini Hydel (Pedda pally HES)	9.16	31.03.2016	31.35
11	Pochampad Stage -II	9.00	31.03.2016	29.60
12	Priya dharshini Jurala	234.00	31.03.2016	688.91
13	Lower Jurala HES	240.00	31.03.2016	1515.33
14	Pulichinthala HES	120.00	31.03.2016	226.98
	Grand Total	5324.26		18594.02


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ANNEXURE -A23
Summary Sheet

PART-I
FORM-1

Name of the Company

TSGENCO

Name of the Power Station :

KTPS-Stage-VII(800MW)

(Rs in Crs)

S.No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1.1	Depreciation	0.00	0.00	0.00	0.00	63.95
1.2	Return on Capital Employed ¹	0.00	0.00	0.00	0.00	168.33
1.3	O & M Expenses	0.00	0.00	0.00	0.00	55.69
	Total	0.00	0.00	0.00	0.00	287.97
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	0	0	0	0	2.89
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0	0	0	0	0.03
2.3	Rate of Energy Charge ex-bus(REC) ^{3A,3B,3C}	0	0	0	0	2.92


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Plant Characteristics

Name of the Company TSGENCO

Name of the Power Station Kothagudem Thermal Power station -Stage VII

Basic characteristics of the plant¹ Coal based thermal plant with conventional Boiler and Steam Turbine.

Special Features of the Plant

Site Specific Features² A Non pit head station

Special Technological Features³

Environmental Regulation related features⁴ : ESPs are provided for pollution control in both the Units. Space is provided for the Flue Gas Desulphurisation system. The design and layout of steam generator and its auxiliaries would be such that a wet / dry FGD system can be installed.

Any other special features

Fuel Details⁵	Primary Fuel	Secondary Fuel	Alternate Fuels	
	Coal	Heavy Oil/ Light Diesel/Oil		
Details	Module number or Unit			
(1)	(2)			
Installed Capacity (IC)	800MW			
Date of Commercial Operation (COD)	26.12.2018			
Type of cooling system ⁶	Closed cycle cooling system with ND cooling			
Type of Boiler Feed Pump ⁷	Motor driven & Turbine driven			

PART-I
FORM-3

Normative parameters considered for tariff computations

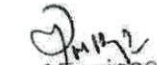
Name of the Company TSGENCO

Name of the Power Station KTPS-Stage-VII

Year Ending March

Particulars	Unit	As per filings	As per TSERC norms
		2014-19	1 of 2008 regulations
-1		2	3
Rate of Return on Capital Employed	%	12.11%	Not mentioned
Target Availability	%	85.00%	85.00%
Target PLF	%	85.00%	85.00%
Auxiliary Energy Consumption	%	5.25	5.25
Gross Station Heat Rate	kCal/kWh	2247.80	
Specific Fuel Oil Consumption	ml/kWh	0.5	0.5
O&M Cost *	Rs.Lakh/MW	As per regulations	As per regulations
Cost of Coal/Lignite for WC ¹	in Months	1	1
Cost of Secondary Fuel Oil for WC ¹	in Months	1	1
Fuel Cost for WC ²	in Months		
Liquid Fuel Stock for WC ²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	1% of Capital cost	1% of Capital cost
Receivables for WC	in Months	2	2
Prime lending Rate of SBI	%	8.55%	8.55%
Incentive Rate	Paise / kWh	25	25

* payrevision commitment of 40% on salaries and allowances is extra from 1.4.2018.



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Details of Project Specific Loans

Name of the Company **TSGENCO**

Name of the Power Station **KTPS-Stage-VII**

Particulars 1	Package1 2
Source of Loan ¹	PFC
Currency ²	Indian Rupee
Amount of Loan sanctioned (In laks)	432,141.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	-
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	
Margin, if Floating Interest ⁸	Yes
Are there any Caps/Floor ⁹	
If above is yes,specify caps/floor	
Moratorium Period ¹⁰	4 years
Moratorium effective from	31.03.2015
Repayment Period ¹¹	12 Years
Repayment effective from	31.07.2019
Repayment Frequency ¹²	Monthly
Repayment Instalment ^{13,14}	144
Base Exchange Rate ¹⁶	


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PART-I
FORM- 11

Statement of Depreciation

Name of the Company TSGENCO

Name of the Power Station KTPS-VII

Amount in Rs. Crs.

Financial Year	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Depreciation on Capital Cost	0.00	0.00	0.00	0.00	4604.92
Depreciation recovered during the Year	0.00	0.00	0.00	0.00	63.95
Depreciation & Advance against Depreciation recovered during the year	0.00	0.00	0.00	0.00	63.95
Cumulative Depreciation & Advance against Depreciation recovered upto the year	0.00	0.00	0.00	0.00	63.95

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Coal & Commercial
TSGENCO, V.S., Hyderabad-82


Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS Stage VII

Rs in Crs

Sl.N o	Asset Name	Depreciation Rate as per MoP Depreciaton rate shedule.	2018-19		
			Gross Block as on 01.04.2018 or as on COD whichever is later	Additoin	Deprecitaiion amount
1	BUILDINGS	3.02%	0.00	179.15	3.51
2	PLANT AND MACHINERY	7.84%	0.00	4,148.40	81.31
3	HYDRAULIC WORKS	7.84%	0.00	239.06	4.69
4	OTHER CIVIL WORKS	3.02%	0.00	38.26	0.29
5	FURNITURE AND FIXTURES	12.77%	0.00	0.32	0.03
6	COMPUTERS	33.40%	0.00	0.19	0.02
7	OFFICE EQUIPMENT	12.77%	0.00	0.38	0.06
8	VEHICLES	33.40%	0.00	0.20	0.00
			0	4605.97	89.90


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TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13

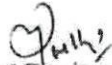
Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company
Name of the Power Station

TELANAGANA STATE POWER GENERATION CORPORATION LIMITED
Kothagudem Thermal Power Station-Stage VII

(Amount in lakh)

Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
Loan(REC)						
Gross loan - Opening	-	-	34,670.00	91,118.54	244,950.06	337,398.77
Cumulative repayments of Loans upto previous year		-	-	-	-	-
Net loan - Opening		-	34,670.00	91,118.54	244,950.06	337,398.77
Add: Drawal(s) during the Year		34,670.00	56,448.54	153,831.52	92,448.71	59,547.54
Less: Repayment (s) of Loans during the year		-	-	-	-	-
Net loan - Closing		34,670.00	91,118.54	244,950.06	337,398.77	396,946.31
Average Net Loan		17,335.00	62,894.27	168,034.30	291,174.42	367,172.54
Rate of Interest on Loan		11.75%	11.75%	11.75%	11.50%	11.50%
Interest on loan		11.16	5,922.97	16,535.70	32,181.92	37,684.69


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 Coal & Commercial
 TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 13A

Name of the Company

TSGENCO

Name of the Power Station

KTPS-VII

(Amount in Crs)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6
Regulated Rate Base ¹	0.00%	0.00%	0.00%	0.00%	12.11%
WACC ¹	0.00	0.00%	0.00%	0.00%	5285.94
RoCE*	0.00	0.00	0.00	0.00	168.33

*RoCE considered from COD (26.12.2018) TO 31.03.2019


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TSGENCO, V.S., Hyderabad-82

PART-I
FORM- 14

Working Capital


Name of the Company TSGENCO

Name of the Power Station KTPS-VII

Amount in Crs

Sl. No.	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	144.95
2	O & M expenses	0.00	0.00	0.00	0.00	17.64
3	Maintenance Spares	0.00	0.00	0.00	0.00	46.05
4	Recievables	0.00	0.00	0.00	0.00	472.38
	Total Working Capital*	0.00	0.00	0.00	0.00	681.02

The Availability for KTPS VII is considered from COD i.e 26.12.2018.


Chief Engineer
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TSGENCO, V.S., Hyderabad-82


PART-I
FORM-18

Details/Information to be Submitted in respect of Fuel for Computation of Energy Charges

Name of the Company
Name of the Power Station

TSGENCO
KTPS Stage VII

Sl. No.	Month	Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	249452.00	261068.00	293389.00
4	Normative Transif & Handling Losses (For coal/Lignit based Projects)	(MMT)	1995.62	2088.54	2347.11
14	Total amount Charged for coal/lignite supplied including Transportation (8+13)	(Rs.)			
	weighted average price	(Rs./MT)	5270.43	5307.33	5217.56
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	4256	4354	4254


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Details of common loans

FORM- 8

Name of the Company TSGENCO
Name of the Power Station HQ loans for Working Capital requirements

(Amount in lacs)

Particulars	Package1	Package2	Package3	Package4	Package5	Package6	Package7	Package 8	Package 9	Package 10	Package 11	Package 11
1	2	3	4	5	6			7	8	9	10	11
Source of Loan ¹	REC	PFC	Punjab& Sind Bank	SBH	L&T	Union Bank of India	PFC	REC	PFC	PFC	PFC	Andhra Bank
Currency ²	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee
Amount of Loan sanctioned	100000.00	100000.00	22000.00	30000.00	30000.00	20000.00	25000.00	100000.00	25000.00	25000.00	50000.00	50000.00
Amount of Gross Loan drawn upto 31.03.2014/COD ^{3,4,5,13,15}	0.00	0.00	8667.52	30000.00	30000.00	30000.00	25000.00	0.00	0.00	0.00	0.00	0
Interest Type ⁶	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating
Fixed Interest Rate, if applicable	-	-	-	-	-	-	-	-	-	-	-	-
Base Rate, if Floating Interest ⁷	-	-	Base Rate	Base Rate	Base Rate	Base Rate	-	-	-	-	-	-
Margin, if Floating Interest ⁸	No	No	No	No	No	No	No	No	No	No	No	No
Are there any Caps/Floor ⁹	-	-	-	Yes	Yes	Yes	-	-	-	-	-	Yes
If above is yes, specify caps/floor	-	-	-	1.00%	1.00%	0.25%	-	-	-	-	-	0.85%
Moratorium Period ¹⁰	2 years	3 years	6 months	3 years	2 years	2 months	6 months	2 years	6 months	6 months	NIL	6 months
Moratorium effective from	30.12.14	31.12.14	20.11.2009	31.03.12	27.06.13	28.06.13	26.03.2014	28.02.2017	21.01.19	21.01.19	21.01.19	30.03.2019
Repayment Period ¹¹	3 years	7 years	10 years	3 years	8 Years	10 months	6 months	3 years	1 year	1 year	1 year	2 1/2 years
Repayment effective from	31.01.17	15.01.18	29.06.10	31.03.15	30.06.15	30.09.13	15.10.2014	31.03.2019	16.08.19	16.08.19	-	31.10.2019
Repayment Frequency ¹²	Monthly	Monthly	Monthly	Yearly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Bullet payment	Monthly
Repayment Instalment ^{13,14}	36	84	120	3	96	10	6	36	6	6	1	30
Base Exchange Rate ¹⁵	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Jany
Chief Engineer
Coal & Commercial
TSGENCO, V.S., Hyderabad-82

**PART-I
FORM- 13**

Calculation of Weighted Average Rate of Interest on Actual Loans¹


Name of the Company
Name of the Power Station

TELANGANA STATE POWER GENERATION CORPORATION LIMITED
HQ loans

(Amount in lakhs)

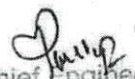
Sl. no.	Particulars	As on 31.03.14	2014-15	2015-16	2016-17	2017-18	2018-19
	2	3	4	5	6	7	8
1	Loan-1(REC)(Working capital)	100000.00					
	Gross loan - Opening		0.00	45000.00	80000.00	100000.00	100000.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	8333.33	41666.66
	Net loan - Opening		0.00	45000.00	80000.00	91666.67	58333.34
	Add: Drawal(s) during the Year		45000.00	35000.00	20000.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		0.00	0	8333.33	33333.33	33333.34
	Net loan - Closing		45000.00	80000.00	91666.67	58333.34	25000.00
	Average Net Loan		22500.00	62500.00	85833.34	75000.01	41666.67
	Rate of Interest on Loan		12.25%	12.25%	12.25%	12.25%	9.95%
	Interest on loan		1288.76	7078.15	10133.89	8859.81	4279.10
2	Loan-2 PFC(Working Capital)	100000.00					
	Gross loan - Opening		0.00	50000.00	100000.00	100000.00	100000.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	1785.71
	Net loan - Opening		0.00	50000.00	100000.00	100000.00	98214.29
	Add: Drawal(s) during the Year		50000.00	50000.00	0	0	0
	Less: Repayment (s) of Loans during the year		0.00	0	0	1785.71	14285.71
	Net loan - Closing		50000.00	100000.00	100000.00	98214.29	83928.58
	Average Net Loan		25000.00	75000.00	100000.00	99107.15	91071.43
	Rate of Interest on Loan						
	Interest on loan		1527.05	12062.05	11424.52	9927.77	9059.98

3	Loan-3 (Punjab & Sind Bank)(R&M Works)	22000.00					
	Gross loan - Opening	5301.43	8668.00	8668.00	8668.00	8668.00	8668.00
	Cumulative repayments of Loans upto previous year		3366.57	4267.79	5169.31	6070.06	6970.88
	Net loan - Opening	5301.43	4400.21	3498.69	2597.94	1697.12	1697.12
	Add: Drawal(s) during the Year		0	0	0	0	0
	Less: Repayment (s) of Loans during the year		901.22	901.52	900.75	900.82	900.64
	Net loan - Closing	4400.21	3498.69	2597.94	1697.12	796.48	796.48
	Average Net Loan	4850.82	3949.45	3048.32	2147.53	1246.80	1246.80
	Rate of Interest on Loan	10.25%	10%	9.75%	9.70%	9.70%	9.70%
	Interest on loan	499.91	396.35	300.00	211.23	124.04	124.04
4	Loan-4 (SBH)(Working Capital)	30000.00					
	Gross loan - Opening	30000.00	30000.00	30000.00	30000.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	20000.05	0.00	0.00
	Net loan - Opening	30000.00	30000.00	9999.95	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		0.00	20000.05	9999.95	0.00	0.00
	Net loan - Closing	30000.00	9999.95	0.00	0.00	0.00	0.00
	Average Net Loan	30000.00	19999.98	4999.98	0.00	0.00	0.00
	Rate of Interest on Loan	11.50%	11.50%	11.05%			
	Interest on loan	3440.27	2245.48	1091.23	0.00	0.00	0.00
5	Loan-5 (L&T)(Working Capital)	30000.00					
	Gross loan - Opening	30000.00	30000.00	30000.00	30000.00	30000.00	30000.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	3125.00	6875.00	10625.00
	Net loan - Opening	30000.00	30000.00	26875.00	23125.00	19375.00	19375.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		0.00	3125.00	3750.00	3750.00	3750.00
	Net loan - Closing	30000.00	26875.00	23125.00	19375.00	15625.00	15625.00
	Average Net Loan	30000.00	28437.50	25000.00	21250.00	17500.00	17500.00
	Rate of Interest on Loan	11.20%	11.20%	10.75%	10.70%	10.70%	10.70%
	Interest on loan	3350.79	3159.34	2698.72	2289.87	1864.15	1864.15


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6	Loan-6 (UBI)(Capital)	20000.00					
	Gross loan - Opening	6000.00	20000.00	0.00	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		14000.00	0.00	0.00	0.00	0.00
	Net loan - Opening		6000.00	0.00	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		6000.00	0.00	0.00	0.00	0.00
	Net loan - Closing		0.00	0.00	0.00	0.00	0.00
	Average Net Loan		3000.00	0.00	0.00	0.00	0.00
	Rate of Interest on Loan		10.50%	0.00	0.00	0.00	0.00
	Interest on loan		111.92	0.00	0.00	0.00	0.00
7	Loan-7(PFC)(STL)(working Capital)	25000.00					
	Gross loan - Opening	25000.00	25000.00	0.00	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	0.00
	Net loan - Opening		25000.00	0.00	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		25000.00	0.00	0.00	0.00	0.00
	Net loan - Closing		0.00	0.00	0.00	0.00	0.00
	Average Net Loan		12500.00	0.00	0.00	0.00	0.00
	Rate of Interest on Loan		11.80%	0.00	0.00	0.00	0.00
	Interest on loan		2222.82	0.00	0.00	0.00	0.00
8	Loan-8(REC)(working Capital)	100000.00					
	Gross loan - Opening		0.00	0.00	0.00	85000	85000
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	0.00
	Net loan - Opening		0.00	0.00	0.00	85000.00	85000.00
	Add: Drawal(s) during the Year		0	0.00	85000.00	0.00	15000.00
	Less: Repayment (s) of Loans during the year		0.00	0	0.00	0.00	1875.00
	Net loan - Closing		0.00	0.00	85000.00	85000.00	98125.00
	Average Net Loan		0.00	0.00	42500.00	85000.00	91562.50
	Rate of Interest on Loan				10.00%	10.00%	10.00%

	Interest on loan		0.00	0.00	291.78	8500.00	8920.03
9	Loan-9(PFC)(working Capital)	25000.00	0.00	0.00			
	Gross loan - Opening		0.00	0.00	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	0.00
	Net loan - Opening		0.00	0.00	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0	0.00		0.00	25000.00
	Less: Repayment (s) of Loans during the year		0.00	0	0.00	0.00	0.00
	Net loan - Closing		0.00	0.00	0.00	0.00	25000.00
	Average Net Loan		0.00	0.00	0.00	0.00	12500.00
	Rate of Interest on Loan		-	-	-	-	11%
	Interest on loan		0.00	0.00	0.00	0.00	515.41
10	Loan-10(PFC)(working Capital)	25000.00					
	Gross loan - Opening		0.00	0.00	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	0.00
	Net loan - Opening		0.00	0.00	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0	0.00	0.00	0.00	25000.00
	Less: Repayment (s) of Loans during the year		0.00	0	0.00	0.00	0.00
	Net loan - Closing		0.00	0.00	0.00	0.00	25000.00
	Average Net Loan		0.00	0.00	0.00	0.00	12500.00
	Rate of Interest on Loan		-	-	-	-	11%
	Interest on loan		0.00	0.00	0.00	0.00	515.41


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11	Loan-11(PFC)(working Capital)	50000.00					
	Gross loan - Opening		0.00	0.00	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	0.00
	Net loan - Opening		0.00	0.00	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0	0.00	0.00	0.00	50000.00
	Less: Repayment (s) of Loans during the year		0.00	0	0.00	0.00	0.00
	Net loan - Closing		0.00	0.00	0.00	0.00	50000.00
	Average Net Loan		0.00	0.00	0.00	0.00	25000.00
	Rate of Interest on Loan		-	-	-	-	11%
	Interest on loan		0.00	0.00	0.00	0.00	1030.82
12	Loan-12(Andhra Bank)(Tadicherla coal)	50000.00					
	Gross loan - Opening		0.00	0.00	0.00	0.00	0.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	0.00	0.00
	Net loan - Opening		0.00	0.00	0.00	0.00	0.00
	Add: Drawal(s) during the Year		0	0.00	0.00	0.00	5000.00
	Less: Repayment (s) of Loans during the year		0.00	0	0.00	0.00	0.00
	Net loan - Closing		0.00	0.00	0.00	0.00	5000.00
	Average Net Loan		0.00	0.00	0.00	0.00	2500.00
	Rate of Interest on Loan		-	-	-	-	9.60%
	Interest on loan		0.00	0.00	0.00	0.00	1.32
13	CC Limits with various Banks						
	Closing Outstanding		35620.00	45912.00	45354.00	70018.00	66522.00
	Interest on CC limits		2851.43	2108.25	1832.11	1597.63	2899.91


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