



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

Tariff Filings
Of
TSGENCO
For the control period
F.Y. 2019-2024

Volume 2 of 2

**BEFORE THE
TELANGANA STATE ELECTRICITY REGULATORY COMMISSION
AT HYDERABAD.**

O.P. of 2021

In the matter of:

Determination of capital cost for new stations and Generation Tariff for the existing and new stations for the control period (2019-24) under Section 62 of the Electricity Act, 2003 for the electricity supplied by TSGENCO to Distribution Licensees.

Telangana State Power Generation Corporation Limited,

Applicant

And

Southern Power Distribution Company of Telangana Ltd., & 2 Others

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 (420MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	17.14	0.00	0.00	0.00	0.00
1.2	Interest and Finance charges on loan	1.76	0.00	0.00	0.00	0.00
1.3	Interest on working Capital	59.11	0.00	0.00	0.00	0.00
1.4	Depreciation	64.18	0.00	0.00	0.00	0.00
1.5	O & M Expenses	561.03	0.00	0.00	0.00	0.00
	Total	703.22	0.00	0.00	0.00	0.00

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

2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	3.22	0.00	0.00	0.00	0.00
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.10	0.00	0.00	0.00	0.00
2.3	Rate of Energy Charge ex-bus(REC)*	3.32	0.00	0.00	0.00	0.00

*Weighted average variable charge for FY 2019-20.

****KTPS O&M units phasing out details for 2019-24 : Unit 1(60MW) : 28.03.2020 @14Hrs**

:Unit 2 (60MW) : 02.02.2020 @15Hrs ,

:Unit 4 (60MW) : 31.03.2020 @18:35Hrs

:Unit 5 (120MW) : 13.03.2020 @15:15Hrs

:Unit 7(120MW) : 31.03.2020 @18.06Hrs

***** KTPS O&M Unit-3, 6& 8 has been phased in control period 2014-19.**

Plant Characteristics

Name of the Company : TSGENCO

Name of the Power Station Kothagudem Thermal Power Station (KTPS ABC (420MW))

Basic characteristics of the plant¹ Coal based thermal Station (3X60&2X120MW) with conventional Boiler and Steam Turbine

Special Features of the Plant Unit 1to 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				
Details	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

**PART-I
FORM-3**

Normative parameters considered for tariff computations

Name of the Company **TSGENCO**

Name of the Power Station **KTPS O&M**

Year ending March

Particulars	Unit	As per fillings	As per TSERC /APREC norms
		2019-24	1 of 2019 Regulations
1		2	3
Rate of Return on Equity	%	15.5%	15.5%
Target Availability	%	70%	70%
Target PLF	%	70%	70%
Auxiliary Energy Consumption	%	10.00%	10.00%
Gross Station Heat Rate	kCal/kWh	3000	3000
Specific Fuel Oil Consumption	ml/kWh	2	2
O&M Cost *		As per Regulations	As per Regulations
Cost of Coal/Lignite for WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Receivables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

**PART-I
FORM- 7**

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

KTPS ABC

(Amount in lacs)

Particulars	Package1
1	2
Source of Loan ¹	PFC
Currency ²	Indian Rupee
Amount of Loan sanctioned	6,840.00
Amount of Gross Loan drawn upto 31.03.2019	6,815.00
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	10.68%
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	Monthly
Repayment Instalment ^{13,14}	89*
Base Exchange Rate ¹⁶	

Statement of Depreciation

Name of the Company TSGENCO

Name of the Power Station KTPS ABC

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	3	4	5	6	7
Depreciation on Capital Cost	773.20	0.00	0.00	0.00	0.00
Depreciation recovered during the Year	64.18	0.00	0.00	0.00	0.00
Depreciation & Advance against Depreciation recovered during the year	64.18	0.00	0.00	0.00	0.00
Cumulative Depreciation & Advance against Depreciation recovered upto the year	729.66				

**PART-I
FORM- 12**

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS (ABC)

Rs in Crs

2019-20			KTPS O&M FY 2019-20		
Sl.No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule.	Gross Block as on 01.04.2019 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	6.30	0.00	0.00
2	LAND DEPOSITS	0.00%	0.00	0.00	0.00
3	BUILDINGS	3.02%	23.04	0.04	5.39
4	PLANT AND MACHINERY	7.84%	1,130.09	3.56	103.55
5	HYDRAULIC WORKS	7.84%	20.81	0.00	0.00
6	OTHER CIVIL WORKS	3.02%	26.57	-0.20	2.80
7	FIXTURES	12.77%	1.62	0.02	0.23
8	VEHICLES	33.40%	5.27	0.00	0.00
9	COMPUTERS	33.40%	3.33	0.28	0.45
10	CAPITAL SPARES.	7.84%	64.61	0.00	20.23
11	OFFICE EQUIPMENT		1.41	0.11	0.62
			1,283.06	3.81	133.27

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)

(Rs. in lakhs)

Sl. no.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
	Loan	6,815.00					
	Gross loan - Opening	1,646.00	6,815.00	6,815.00	6,815.00		
	Cumulative repayments of Loans upto previous year		5,169.00	5,751.00	6,333.00		
	Net loan - Opening		1,646.00	1,064.00	482.00		
	Add: Drawal(s) during the Year		-	-	-		
	Less: Repayment (s) of Loans during the year		582.00	582.00	482.00		
	Net loan - Closing		1,064.00	482.00	-		
	Average Net Loan		1,064.00	482.00	-		
	Rate of Interest on Loan		10.68%				
	Interest on loan		148.00	85.00	24.00		

FORM 13 A

Name of the Company

TSGENCO

Name of the Power Station

KTPS ABC

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	0.00%	0.00%	0.00%	0.00%
Equity	91.26	0.00	0.00	0.00	0.00
RoE	17.14	0.00	0.00	0.00	0.00
Interest and Finance charges on loan					
Interest rate	10.68%	0.00%	0.00%	0.00%	0.00%
Loan	16.46	0.00	0.00	0.00	0.00
Interest on loan	1.76	0.00	0.00	0.00	0.00
Interest on working Capital					
Interest rate	12.05%	0.00%	0.00%	0.00%	0.00%
Working capital	490.51	0.00	0.00	0.00	0.00
IWC	59.11	0.00	0.00	0.00	0.00
Total (RoE+Int on loan+IWC)	78.00	0.00	0.00	0.00	0.00

PART-I**FORM- 14****Working Capital****Name of the Company**

TSGENCO

Name of the Power Station

KTPS (ABC)

(Amount in lacs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	71.45	0.00	0.00	0.00	0.00
2	O & M expenses	46.75	0.00	0.00	0.00	0.00
3	Maintenance Spares	112.21	0.00	0.00	0.00	0.00
4	Recievables	260.10	0.00	0.00	0.00	0.00
	Total Working Capital	490.51	0.00	0.00	0.00	0.00

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.		Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	222992	165568	131688
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1783.936	1324.544	1053.504
14	Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
	weighted average price	Rs/MT	2766.16	2837.43	2856.82
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	2923	2956	2937

ANNEXURE -A9

FORM- 1

Summary Sheet

Name of the Company

TSGenco

Name of the Power Station :

KTPS Stage-V(2X250MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	90.92	76.10	74.74	58.47	42.19
1.2	Interest and Finance charges on loan	0.00	0.00	0.00	0.00	0.00
1.3	Interest on working Capital	44.56	44.68	45.24	45.45	44.00
1.4	Depreciation	86.67	86.67	86.67	86.67	0.00
1.5	O & M Expenses	200.81	209.82	220.47	230.33	240.73
	Total	422.96	417.27	427.11	420.91	326.91

2.1	Rate of Energy Charge from Primary Fuel (REC) ²	2.67	2.67	2.67	2.67	2.67
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.09	0.09	0.09	0.09	0.09
2.3	Rate of Energy Charge ex-bus(REC)*	2.76	2.76	2.76	2.76	2.76

*Weighted average variable charge for FY 2019-20.

**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	

**PART-I
FORM-3**

Normative parameters considered for tariff computations

Name of the Company **TSGENCO**

Name of the Power Station **KTPS-V**

Particulars	Unit	As per filings	As per TSERC norms
		2019-24	
1		2	3
Rate of Return on Equity	%	15.50%	15.50%
Target Availability	%	80%	80%
Target PLF	%	80%	80%
Auxiliary Energy Consumption	%	9	9
Gross Station Heat Rate	kCal/kWh	2500	2500
Specific Fuel Oil Consumption	ml/kWh	2	2
O&M Cost *		As per Regulations	
Cost of Coal/Lignite for WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Receivables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019.	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

KTPS V

(Amount in lacs)

Particulars	Package1
1	2
Source of Loan ¹	
Currency ²	
Amount of Loan sanctioned	
Amount of Gross Loan drawn upto 31.03.2019/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	

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

KTPS-V

(Amount in Crs)

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	3	4	5	6	7
Depreciation on Capital Cost	2159.05	2166.83	2246.25	2246.25	2246.25
Depreciation recovered during the Year	86.67	86.67	86.67	86.67	0.00
Depreciation & Advance against Depreciation recovered during the year	86.67	86.67	86.67	86.67	0.00
Cumulative Depreciation & Advance against Depreciation recovered upto the year	1761.63	1848.30	1934.96	2021.63	

**PART-I
FORM- 12**

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS V

(Amount in Crs)

2019-20				
Sl.No	Asset Name	Gross Block as on 01.04.2019 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	3.52	0.00	0.00
2	LAND DEPOSITS	0.00	0.00	0.00
3	BUILDINGS	92.35	0.12	0.02
4	PLANT AND MACHINERY	1,812.40	2.24	0.41
5	HYDRAULIC WORKS	195.84	0.00	12.95
6	OTHER CIVIL WORKS	78.43	0.00	7.19
7	FURNITURE AND FIXTURES	0.86	0.03	0.03
8	VEHICLES	0.20	0.17	0.05
9	COMPUTERS	2.62	0.29	0.07
10	OTH.FIXED ASSETS & CAPITAL SPARES.	50.90	0.00	2.38
11	OFFICE EQUIPMENT	0.78	0.36	0.06
		2,237.90	3.20	23.16

PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station KTPS-V

(Rs. in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	484.09	405.20	397.96	311.29	224.62
RoE	90.92	76.10	74.74	58.47	42.19
Interest and Finance charges on loan					
Interest rate	10.68%	10.68%	10.68%	10.68%	10.68%
Loan	0.00	0.00	0.00	0.00	0.00
Interest on loan	0.00	0.00	0.00	0.00	0.00
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	369.83	370.77	375.43	377.19	365.13
IWC	44.56	44.68	45.24	45.45	44.00
Total (RoE+Int on loan+IWC)	135.48	120.78	119.98	103.92	86.19

**PART-I
FORM- 14**

Working Capital

Name of the Company TSGENCO

Name of the Power Station KTPS-V

(Amount in lacs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	80.81	80.59	80.59	80.59	80.81
2	O & M expenses	16.73	17.49	18.37	19.19	20.06
3	Maintenance Spares	40.16	41.96	44.09	46.07	48.15
4	Recievables	232.12	230.73	232.37	231.34	216.11
	Total Working Capital	369.83	370.77	375.43	377.19	365.13

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)	254380	238390	260590
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	2035.04	1907.12	2084.72
14	Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
	weighted average Price	Rs/MT	2895.38	2870.03	2827.3
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	2925	2975	2878

ANNEXURE -A10
Summary Sheet

FORM 1

Name of the Power Station :

KTPS VI 1X500MW

Rs in Crs

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	101.75	116.32	130.22	141.97	127.55
1.2	Interest and Finance charges on loan	71.76	49.20	27.03	6.07	0.00
1.3	Interest on working Capital	46.94	47.19	47.54	47.89	46.01
1.4	Depreciation	133.63	133.63	133.63	133.63	30.43
1.5	O & M Expenses	201.62	210.50	219.87	229.73	240.13
	Total	555.70	556.85	558.28	559.30	444.12

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

2.1	Rate of Energy Charge from Primary Fuel (REC) ²	2.64	2.64	2.64	2.64	2.64
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.09	0.09	0.09	0.09	0.09
2.3	Rate of Energy Charge ex-bus(REC)*	2.73	2.73	2.73	2.73	2.73

*Weighted average variable charge for FY 2019-20.

**PART-I
FORM-2**

Plant Characteristics

Name of the Company

TSGENCO

Basic characteristics of the plant¹

Coal based thermal plant with conventional Boiler and Steam Turbine.

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		
Type of cooling system ⁶	Closed cycle cooling system with ND cooling towers		
Type of Boiler Feed Pump ⁷	Motor driven		

**PART-I
FORM-3**

Normative parameters considered for tariff computations

Name of the Company

TSGENCO

Particulars	Unit	As per filings	As per TSERC norms
Rate of Return on Equity	%	15.50%	15.50%
Target Availability	%	80.00%	80.00%
Target PLF	%	80.00%	80.00%
Auxiliary Energy Consumption	%	7.50%	7.50%
Gross Station Heat Rate	kCal/kWh	2450	2450
Specific Fuel Oil Consumption	ml/kWh	2	2
O&M Cost *	As per regulations	As per regulations	
Cost of Coal/Lignite for WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Receivables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019.	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

Details of Project Specific Loans

Name of the Company

TELANAGANA STATE POWER GENERATION CORPORATION LIMITED

(Rs. in lakhs)

Particulars	Package1	Package3	Package4	Package5
1	2	3	4	5
Source of Loan ¹	PFC Ltd.,	Bank of Baroda	Tamilnad Mercantile Bank Ltd.,	Canara Bank
Currency ²	Indian Rupee	Indian Rupee	Indian Rupee	Indian Rupee
Amount of Loan sanctioned	176200.00	30000.00	10000.00	20000.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	176200.00	30000.00	9994.00	20000.00
Interest Type ⁶	Floating	Fixed	Floating	Floating
Fixed Interest Rate, if applicable		10.80%		
Base Rate, if Floating Interest ⁷	10.68%		9.40% - MCLR	10.05% - MCLR
Margin, if Floating Interest ⁸	NO	NO	NO	NO
Are there any Caps/Floor ⁹				
If above is yes,specify caps/floor				
Moratorium Period ¹⁰	3 years	3 years	1 year	27 months
Moratorium effective from	12.12.07	29.06.09	20.11.09	12.11.09
Repayment Period ¹¹	12 years	10 years	10 Years	10 Years
Repayment effective from	15.10.10	30.09.12	31.12.10	28.02.12
Repayment Frequency ¹²	Monthly	Quarterly	Monthly	Quarterly
Repayment Instalment ^{13,14}	93*	40	120	40
Base Exchange Rate ¹⁶	Not Applicable	Not Applicable	Not Applicable	Not Applicable

* From Dec'16 onwards loan repayment pertaining to PFC converted from Quarterly to monthly. The above installments are the total of both quarterly and monthly

Statement of Depreciation

Name of the Company

TSGENCO

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation on Capital Cost	2530.95	2530.95	2530.95	2530.95	2530.95
Depreciation recovered during the Year	133.63	133.63	133.63	133.63	30.43
Depreciation & Advance against Depreciation recovered during the year	133.63	133.63	133.63	133.63	30.43
Cumulative Depreciation & Advance against Depreciation recovered upto the year	1450.92	1584.56	1718.19	1851.83	1882.26

**PART-I
FORM- 12**

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS VI

Amount in Crs

2019-20 Thermal Plants		KTPS VI		
Sl.No	Asset Name	Gross Block as on 01.04.2019 or as on COD whichever is later	Additoin	Deprecitiaon amount
1	LAND AND LAND RIGHTS	0.00	0.00	0.00
2	LAND DEPOSITS	0.00	0.00	0.00
3	BUILDINGS	175.55	0.14	5.87
4	PLANT AND MACHINERY	2,225.01	-37.34	114.06
5	HYDRAULIC WORKS	178.79	0.00	9.44
6	OTHER CIVIL WORKS	32.07	0.00	1.19
7	FURNITURE AND FIXTURES	0.57	0.01	0.01
8	VEHICLES	0.00	0.00	0.00
9	COMPUTERS	0.47	0.22	0.01
10	OTH.FIXED ASSETS & CAPITAL SPARES.	3.94	2.43	0.21
11	OFFICE EQUIPMENT	0.10	0.00	0.00
		2,616.49	-34.54	130.78

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Power Station

Kothagudem Thermal Power Station Stage-VI

(Rs. in lakhs)

Sl.No.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
1	Loan-1 (PFC)	176200.00					
	Gross loan - Opening	50400.63	176200.00	176200.00	176200.00	176200.00	
	Cumulative repayments of Loans upto previous year		125799.37	140919.56	156039.75	171159.94	
	Net loan - Opening		50400.63	35280.44	20160.25	5040.06	
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	
	Less: Repayment (s) of Loans during the year		15120.19	15120.19	15120.19	5040.06	
	Net loan - Closing		35280.44	20160.25	5040.06	0.00	
	Average Net Loan		35280.44	20160.25	5040.06	0.00	
	Rate of Interest on Loan		10.68%				
	Interest on loan		4658.00	3032.00	1418.00	113.00	
2	Loan (Bank of Baroda)	30000.00					
	Gross loan - Opening	9645.89	30000.00	30000.00	30000.00	30000.00	
	Cumulative repayments of Loans upto previous year		20354.11	23354.11	26354.11	29354.11	
	Net loan - Opening		9645.89	6645.89	3645.89	645.89	
	Add: Drawal(s) during the Year						
	Less: Repayment (s) of Loans during the year		3000.00	3000.00	3000.00	645.89	
	Net loan - Closing		6645.89	3645.89	645.89	0.00	
	Average Net Loan		6645.89	3645.89	645.89	0.00	
	Rate of Interest on Loan		10.80%				
	Interest on loan		922.00	596.00	272.00	17.00	
3	Loan (Tamilnad Mercantile Bank Ltd.,)	10000.00					
	Gross loan - Opening	1642.74	9994.00	9994.00			
	Cumulative repayments of Loans upto previous year		8351.26	9351.26			
	Net loan - Opening		1642.74	642.74			
	Add: Drawal(s) during the Year		0.00	0.00			
	Less: Repayment (s) of Loans during the year		1000.00	642.74			
	Net loan - Closing		642.74	0.00			
	Average Net Loan		642.74	0.00			
	Rate of Interest on Loan		9.40%				
	Interest on loan		112.00	22.00			
4	Loan (Canara Bank)	20000.00					
	Gross loan - Opening	5499.62	20000.00	20000.00	20000.00		
	Cumulative repayments of Loans upto previous year		14500.38	16500.38	18500.38		
	Net loan - Opening		5499.62	3499.62	1499.62		
	Add: Drawal(s) during the Year		0.00	0.00	0.00		
	Less: Repayment (s) of Loans during the year		2000.00	2000.00	1499.62		
	Net loan - Closing		3499.62	1499.62	0.00		
	Average Net Loan		3499.62	1499.62	0.00		
	Rate of Interest on Loan		10.05%				
	Interest on loan		444.00	243.00	50.00		

PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company

TSGENCO

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	541.76	619.32	693.32	755.89	679.12
RoE	101.75	116.32	130.22	141.97	127.55
Interest and Finance charges on loan					
Interest rate	10.68%	10.68%	10.68%	10.68%	10.68%
Loan	671.90	460.70	253.07	56.87	0.00
Interest on loan	71.76	49.20	27.03	6.07	0.00
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	389.54	391.60	394.49	397.46	381.86
IWC	46.94	47.19	47.54	47.89	46.01
Total (RoE+Int on loan+IWC)	220.45	212.71	204.78	195.93	173.56

PART-I
FORM- 14

Working Capital

Name of the Company

TSGENCO

(Amount in Crs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	79.93	79.72	79.72	79.72	79.93
2	O & M expenses	16.80	17.54	18.32	19.14	20.01
3	Maintenance Spares	40.32	42.10	43.97	45.95	48.03
4	Recievables	252.49	252.24	252.48	252.65	233.89
	Total Working Capital	389.54	391.60	394.49	397.46	381.86

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)

Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	176670	169965	203990
Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1413.36	1359.72	1631.92
Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
weighted average Price	RS/MT	4033.66	4122.99	4552.21
Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	4260	4124	4015

ANNEXURE -A11

**PART-I
FORM- 1**

Summary Sheet

Name of the Company TSGENCO
Name of the Power Station : RTS B 1X62.5MW

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	7.19	7.19	7.19	6.92	4.66
1.2	Interest and Finance charges on loan	3.54	2.31	1.08	0.00	0.00
1.3	Interest on working Capital	9.28	9.48	9.70	9.94	10.18
1.4	Depreciation	12.05	12.05	12.05	12.05	12.05
1.5	O & M Expenses	89.70	93.99	98.50	103.26	108.28
	Total	121.75	125.01	128.53	132.17	135.16
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC)p ²	2.89	2.89	2.89	2.89	2.89
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.15	0.15	0.15	0.15	0.15
2.3	Rate of Energy Charge ex-bus(REC)*	3.04	3.04	3.04	3.04	3.04

*Weighted avergae variable charge for FY 2019-20.

**PART-I
FORM-3**

Normative parameters considered for tariff computations

Name of the Company **TSGENCO**

Name of the Power Station **RTS-B**

Year ending March

Particulars	Unit	As per fillings	As per TSERC norms
		2019-24	1 of 2019
	1	2	3
Rate of Return on Equity	%	15.5	15.5
Target Availability	%	75%	75%
Target PLF	%	75%	75%
Auxiliary Energy Consumption	%	10.0	10.0
Gross Station Heat Rate	kCal/kWh	3000	3000
Specific Fuel Oil Consumption	ml/kWh	2	2
O&M Cost *		As per regulations	As per regulations
Cost of Coal/Lignite for WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Receivables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

**PART-I
FORM- 7**

Details of Project Specific Loans

Name of the Company TSGENCO

Name of the Power Station RTS-B

Particulars	Package1
1	2
Source of Loan ¹	PFC Ltd.,
Currency ²	Indian Rupee
Amount of Loan sanctioned	5320.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	3553.00
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	10.20%
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	Monthly
Repayment Instalment ^{13,14}	69*
Base Exchange Rate ¹⁶	Not Applicable

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

RTS-B

Rs in Crs

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation on Capital Cost	127.53	127.53	127.53	127.53	127.53
Depreciation recovered during the Year	12.05	12.05	12.05	12.05	12.05
Depreciation & Advance against Depreciation recovered during the year	12.05	12.05	12.05	12.05	12.05
Cumulative Depreciation & Advance against Depreciation recovered upto the year	66.59	78.64	90.69	102.74	114.79

**PART-I
FORM- 12**

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
RTS B

In Crs

2019-20		RTS		
Sl.No	Asset Name	Gross Block as on 01.04.2019 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.30	0.00	0.00
2	LAND DEPOSITS	0.00	0.00	0.00
3	BUILDINGS	2.32	0.00	0.21
4	PLANT AND MACHINERY	121.77	1.54	9.71
5	HYDRAULIC WORKS	0.56	0.00	0.01
6	OTHER CIVIL WORKS	2.57	0.00	0.00
7	FURNITURE AND FIXTURES	0.14	0.00	0.00
8	VEHICLES	0.37	0.00	0.00
9	COMPUTERS	0.38	0.15	0.02
	OTH.FIXED ASSETS & CAPITAL			
10	SPARES.	0.50	0.00	0.07
11	OFFICE EQUIPMENT	0.64	0.01	0.01
		129.54	1.70	10.04

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
RTS-B

(Rs. in lakhs)

Sl.No.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
	2	3	4	5	6	7	8
1	Loan-1 (PFC)	3553.00					
	Gross loan - Opening	118.25	3553.00				
	Cumulative repayments of Loans upto previous year		3434.75				
	Net loan - Opening		118.25				
	Add: Drawal(s) during the Year		0.00				
	Less: Repayment (s) of Loans during the year		118.25				
	Net loan - Closing		0.00				
	Average Net Loan		0.00				
	Rate of Interest on Loan		10.20%				
	Interest on loan		2.00				

PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company TSGENCO

Name of the Power Station RTS-B

Calculation of Return on Equity

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	38.26	38.26	38.26	36.84	24.79
RoE	7.19	7.19	7.19	6.92	4.66
Interest and Finance charges on loan					
Interest rate	10.20%	10.20%	10.20%	10.20%	10.20%
Loan	34.73	22.68	10.63	0.00	0.00
Interest on loan	3.54	2.31	1.08	0.00	0.00
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	77.00	78.67	80.54	82.49	84.50
IWC	9.28	9.48	9.70	9.94	10.18
Total (RoE+Int on loan+IWC)	20.01	18.98	17.98	16.86	14.84

**PART-I
FORM- 14**

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

RTS-B

(Amount in Crores)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	10.43	10.40	10.40	10.40	10.43
2	O & M expenses	7.47	7.83	8.21	8.61	9.02
3	Maintenance Spares	17.94	18.80	19.70	20.65	21.66
4	Recievables	41.15	41.64	42.23	42.83	43.39
	Total Working Capital	77.00	78.67	80.54	82.49	84.50

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)	26031.7	24869.8	23418.6
Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	208.2536	198.9584	187.3488
Total amount Charged for coal/lignite supplied including Transportation	(Rs.)			
Weighted average price	Rs/MT	3346.75	3256.38	3216.04
Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	3685	3664	3529

PART-I
FORM- 1

ANNEXURE -A12
Summary Sheet

Name of the Company

TSGenco

Name of the Power Station :

KTPP Stage I (1X500MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	109.74	113.46	111.97	110.48	90.86
1.2	Interest and Finance charges on loan	46.57	30.23	16.80	3.36	0.00
1.3	Interest on working Capital	47.72	47.77	47.89	48.03	45.67
1.4	Depreciation	136.63	136.63	136.63	136.63	17.31
1.5	O & M Expenses	164.28	171.54	179.20	187.26	195.76
	Non Tariff Income					
	Total	504.93	499.64	492.48	485.76	349.61
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	2.92	2.92	2.92	2.92	2.92
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.10	0.10	0.10	0.10	0.10
2.3	Rate of Energy Charge ex-bus(REC)*	3.02	3.02	3.02	3.02	3.02

*Weighted average variable charge for FY 2019-20.

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)	12.10.2010		
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 **KTPP-Stage1**

Year Ending March

Particulars	Unit	As per filings	As per TSERC norms
		2019-24	
-1		2	3
Rate of Return on Equity	%	15.50%	15.50%
Target Availability	%	80%	80%
Target PLF	%	80%	80%
Auxiliary Energy Consumption	%	7.50%	7.50%
Gross Station Heat Rate	kCal/kWh	2450	2450
Specific Fuel Oil Consumption	ml/kWh	2	2
O&M Cost *	actual	As per regulations	As per regulations
Cost of Coal/Lignite for WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Receivables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

FORM 7

Details of Project Specific Loans

Name of the Company : TSGENCO

Name of the Power Station : KTPP-Stage1

Rs in Lakhs

Particulars	Package1	Package2	Package4
1	2	3	5
Source of Loan ¹	REC LTD.	VIJAYA BANK	BANK OF BARODA
Currency ²	Indian Rupee	Indian Rupee	Indian Rupee
Amount of Loan sanctioned	154451.00	20000.00	25000.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	154451.00	20000.00	25000.00
Interest Type ⁶	Floating	Floating	Fixed
Fixed Interest Rate, if applicable			10.80%
Base Rate, if Floating Interest ⁷	10.44%	9.50%-Base Rate	
Margin, if Floating Interest ⁸	No	No	No
Are there any Caps/Floor ⁹			
If above is yes,specify caps/floor			
Moratorium Period ¹⁰	54 months	3 Years	2 Years
Moratorium effective from	25.03.06	22.09.06	08.12.07
Repayment Period ¹¹	12 Years	10 Years	10 Years
Repayment effective from	30.09.2010	30.12.2009	31.03.2010
Repayment Frequency ¹²	Monthly	Quarterly	Quarterly
Repayment Instalment ^{13,14}	92*	40	40
Base Exchange Rate ¹⁶	Not applicable	Not applicable	Not applicable

* From Jan'17 onwards loan repayment pertaining to REC converted from Quarterly to monthly. The above installments are the total of both quarterly and monthly

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

KTPP-I

Rs in Crores

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Depreciation on Capital Cost	2587.76	2587.76	2587.76	2587.76	2587.76
Depreciation recovered during the Year	136.63	136.63	136.63	136.63	17.31
Depreciation & Advance against Depreciation recovered during the year	136.63	136.63	136.63	136.63	17.31
Cumulative Depreciation & Advance against Depreciation recovered upto the year	1694.06	1830.70	1967.33	2103.96	2121.27

**PART-I
FORM- 12**

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPP-I

Amount in Crs

2019-20		KTPP-I		
Sl.No	Asset Name	Gross Block as on 01.04.2019 or as on COD whichever is later	Additoinis	Deprecitiaon amount
1	LAND AND LAND RIGHTS	22.20	0.00	0.00
2	LAND DEPOSITS	41.58	0.00	0.00
3	BUILDINGS	142.69	0.00	4.77
4	PLANT AND MACHINERY	2,164.76	0.00	112.89
5	HYDRAULIC WORKS	247.12	0.00	13.05
6	OTHER CIVIL WORKS	83.29	0.70	2.81
7	FURNITURE AND FIXTURES	1.35	0.07	0.03
8	VEHICLES	17.98	0.00	0.00
9	COMPUTERS	1.94	0.07	0.08
10	OTH.FIXED ASSETS & CAPITAL SPARES.	22.79	0.00	1.20
11	OFFICE EQUIPMENT	1.40	0.01	0.06
		2,747.11	0.85	134.88

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company

TELANAGANA STATE POWER GENERATION CORPORATION LIMITED

Name of the Power Station

KTPP Stage-I

(Amount in Lakhs)

Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
Loan-1 (REC)	154451					
Gross loan - Opening	41830.48	154451.00	154451.00	154451.00	154451.00	
Cumulative repayments of Loans upto previous year		112620.52	125491.44	138362.36	151233.28	
Net loan - Opening		41830.48	28959.56	16088.64	3217.72	
Add: Drawal(s) during the Year						
Less: Repayment (s) of Loans during the year		12870.92	12870.92	12870.92	3217.72	
Net loan - Closing		28959.56	16088.64	3217.72	0.00	
Average Net Loan		28959.56	16088.64	3217.72	0.00	
Rate of Interest on Loan		10.44%				
Interest on loan		3751.00	2401.00	1062.00	56.00	
Loan (Vijaya Bank)	20,000.00					
Gross loan - Opening	980.62	20,000.00				
Cumulative repayments of Loans upto previous year		19,019.38				
Net loan - Opening		980.62				
Add: Drawal(s) during the Year						
Less: Repayment (s) of Loans during the year		980.62				
Net loan - Closing		0.00				
Average Net Loan		0.00				
Rate of Interest on Loan		9.50%				
Interest on loan		31.00				

Loan (Bank of Baroda)	25,000.00					
Gross loan - Opening	1,794.42	25,000.00				
Cumulative repayments of Loans upto previous year		23,205.58				
Net loan - Opening		1,794.42				
Add: Drawal(s) during the Year						
Less: Repayment (s) of Loans during the year		1,794.42				
Net loan - Closing		0.00				
Average Net Loan		0.00				
Rate of Interest on Loan		10.80%				
Interest on loan		79.00				

PART-I
FORM- 13A

Name of the Company
Name of the Power Station

TSGENCO
KTPP-I

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	584.28	604.10	596.16	588.23	483.79
RoE	109.74	113.46	111.97	110.48	90.86
Interest and Finance charges on loan					
Interest rate	10.44%	10.44%	10.44%	10.44%	10.44%
Loan	446.05	289.60	160.90	32.20	0.00
Interest on loan	46.57	30.23	16.80	3.36	0.00
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	395.98	396.43	397.41	398.57	379.01
IWC	47.72	47.77	47.89	48.03	45.67
Total (RoE+Int on loan+IWC)	204.02	191.46	176.65	161.87	136.53

PART-I
FORM- 14

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

KTPP-I

(Amount in Crs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	88.43	88.18	88.18	88.18	88.43
2	O & M expenses	13.69	14.30	14.93	15.61	16.31
3	Maintenance Spares	32.86	34.31	35.84	37.45	39.15
4	Recievables	261.01	259.64	258.45	257.33	235.12
	Total Working Capital	395.98	396.43	397.41	398.57	379.01

**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)	179850	188386	189598
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1438.8	1507.088	1516.784
14	Total amount Charged for coal/lignite supplied including Transportation (8+13)	(Rs.)			
	weighted average price	Rs/MT	4756.24	4682.06	4625.2
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	4150	4074	4128

ANNEXURE -A13
Summary Sheet

PART-I
FORM- 1

FORM 1

Name of the Company

TSGENCO

Name of the Power Station :

KTPP-Stage-II (600MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	138.93	72.97	182.01	226.70	228.77
1.2	Interest and Finance charges on loan	228.90	251.19	217.48	184.73	164.93
1.3	Interest on working Capital	58.90	58.41	61.13	62.09	62.42
1.4	Depreciation	179.83	181.88	205.35	212.44	214.38
1.5	O & M Expenses	182.23	190.76	203.30	213.57	223.47
	Total	788.79	755.22	869.27	899.54	893.96
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	2.80	2.80	2.80	2.80	2.80
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.10	0.10	0.10	0.10	0.10
2.3	Rate of Energy Charge ex-bus(REC)*	2.90	2.90	2.90	2.90	2.90

*Weighted average variable charge for FY 2019-20.

**PART-I
FORM-2**

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

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)	600MW				
Date of Commercial Operation (COD)	24.03.2016				
Type of cooling system ⁶	Closed cycle cooling system with ND cooling towers				
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 **KTPP-Stage-1I**

Year Ending March

Particulars	Unit	As per filings	As per TSERC norms
		2019-24	1of 2019
-1		2	3
Rate of Return on Equity	%	15.50%	15.50%
Target Availability	%	80.00%	80.00%
Target PLF	%	80.00%	80.00%
Auxiliary Energy Consumption	%	7	7
Gross Station Heat Rate	kCal/kWh	2400	2400
Specific Fuel Oil Consumption	ml/kWh	2	2
O&M Cost *	Actuals	As per regulations	As per regulations
Cost of Coal/Lignite for WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Recievables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

FORM 7**Details of Project Specific Loans****Name of the Company** **TSGENCO****Name of the Power Station** **KTPP-Stage-I1**

Amount in lakhs

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	46200.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	251457.63	46161.00
Interest Type ⁶	Floating	Floating
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷	10.68%	Base Rate-9.50%
Margin, if Floating Interest ⁸	NO	NO
Are there any Caps/Floor ⁹		
If above is yes,specify caps/floor		
Moratorium Period ¹⁰	7 years	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	Monthly	Quarterly
Repayment Instalment ^{13,14}	130*	40
Base Exchange Rate ¹⁶	Not Applicable	Not Applicable

* From Jan'18 onwards loan repayment pertaining to REC converted from Quarterly to monthly. The above installments are the total of both quarterly and monthly

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

KTPP-II

Amount in Crs.

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Depreciation on Capital Cost	3405.83	3444.78	3889.22	4023.54	4060.17
Depreciation recovered during the Year	179.83	181.88	205.35	212.44	214.38
Depreciation & Advance against Depreciation recovered during the year	179.83	181.88	205.35	212.44	214.38
Cumulative Depreciation & Advance against Depreciation recovered upto the year	686.52	868.40	1073.75	1286.20	1500.57

**PART-I
FORM- 12**

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPP-II

Rs.In Cr

2019-20 Thermal Plants		KTPP-II		
Sl.No	Asset Name	Gross Block as on 01.04.2019 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00	0.00	0.00
2	LAND DEPOSITS	0.00	0.00	0.00
3	BUILDINGS	88.42	0.23	2.96
4	PLANT AND MACHINERY	2,787.60	33.87	148.71
5	HYDRAULIC WORKS	548.76	0.00	28.97
6	OTHER CIVIL WORKS	12.51	0.00	0.42
7	FURNITURE AND FIXTURES	0.18	0.02	0.01
8	VEHICLES	0.00	0.00	0.00
9	COMPUTERS	0.19	0.01	0.02
	OTH.FIXED ASSETS & CAPITAL			
10	SPARES.	171.95	0.00	9.08
11	OFFICE EQUIPMENT	0.05	0.00	0.00
		3,609.65	34.12	190.18

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
Kakatiya Thermal Power Project Stage-II

(Amount in lakhs)

Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
2	3	5	6	7	8	9
Loan-1 (REC)	300529.00					
Gross loan - Opening	251457.63	251457.63	300529.00	300529.00	300529.00	300529.00
Cumulative repayments of Loans upto previous year		57386.86	80736.86	107918.86	135100.86	162282.86
Net loan - Opening		194070.77	219792.14	192610.14	165428.14	138246.14
Add: Drawal(s) during the Year		49071.00	0.00	0.00	0.00	0.00
Less: Repayment (s) of Loans during the year		23350.00	27182.00	27182.00	27182.00	27182.00
Net loan - Closing		219791.77	192610.14	165428.14	138246.14	111064.14
Average Net Loan		219791.77	192610.14	165428.14	138246.14	111064.14
Rate of Interest on Loan		10.68%				
Interest on loan		21017.00	22136.00	19233.00	16330.00	13427.00
Loan-2 (Andhra Bank)	46200.00					
Gross loan - Opening	21869.84	46200.00	46200.00	46200.00	46200.00	46200.00
Cumulative repayments of Loans upto previous year		24330.16	28950.16	33570.16	38190.16	42810.16
Net loan - Opening		21869.84	17249.84	12629.84	8009.84	3389.84
Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
Less: Repayment (s) of Loans during the year		4620.00	4620.00	4620.00	4620.00	3389.84
Net loan - Closing		17249.84	12629.84	8009.84	3389.84	0.00
Average Net Loan		17249.84	12629.84	8009.84	3389.84	0.00
Rate of Interest on Loan		9.50%				
Interest on loan		1879.00	1438.00	962.00	560.00	132.00

PART-I
FORM- 13A

Name of the Company

TSGENCO

Name of the Power Station

KTPP-II

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	739.73	388.51	969.08	1207.06	1218.05
RoE	138.93	72.97	182.01	226.70	228.77
Interest and Finance charges on loan					
Interest rate	10.60%	10.60%	10.60%	10.60%	10.60%
Loan	2159.41	2369.75	2051.73	1742.72	1555.93
Interest on loan	228.90	251.19	217.48	184.73	164.93
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	488.78	484.76	507.33	515.28	517.99
IWC	58.90	58.41	61.13	62.09	62.42
Total (RoE+Int on loan+IWC)	426.73	382.58	460.62	473.52	456.11

PART-I
FORM- 14

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

KTPP-II

(Amount in Crores)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	101.89	101.62	101.62	101.62	101.89
2	O & M expenses	15.19	15.90	16.94	17.80	18.62
3	Maintenance Spares	36.45	38.15	40.66	42.71	44.69
4	Recievables	335.25	329.10	348.11	353.15	352.78
	Total Working Capital	488.78	484.76	507.33	515.28	517.99

**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
KTPP Stage II

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)	217526	202098	219226
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	1740.21	1616.78	1753.81
14	Total amount Charged for coal/lignite supplied including Transportation (8+13)	(Rs.)			
	weighted average price	(Rs./MT)	4756.24	4682.06	4625.20
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	4118	4071	4247

ANNEXURE -A14
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	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	110.82	96.94	91.85	205.14	273.80
1.2	Interest and Finance charges on loan	424.34	432.96	479.29	434.69	387.86
1.3	Interest on working Capital	72.46	72.84	74.76	77.02	78.23
1.4	Depreciation	243.14	256.46	291.50	315.72	327.96
1.5	O & M Expenses	175.01	181.15	187.58	194.11	200.93
	Total	1025.77	1040.34	1124.98	1226.68	1268.77
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p2}	2.53	2.53	2.53	2.53	2.53
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.02	0.02	0.02	0.02	0.02
2.3	Rate of Energy Charge ex-bus(REC)*	2.55	2.55	2.55	2.55	2.55

*Weighted avergae variable charge for FY 2019-20.

**PART-I
FORM-2**

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. 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)	800MW		
Date of Commercial Operation (COD)	26.12.2018		
Type of cooling system ⁶	Closed cycle cooling system with ND cooling towers		
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
		2019-24	1of 2019
1		2	3
Rate of Return on Equity*	%	16.00	15.5
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	2258.55 (CERC 19)	2258.55 (CERC 19)
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 WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Receivables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

- The RoE is considered as 16% in respect of KTPS Stage VII since it has been constructed within the time line (The additional return of 0.5% is allowed as per CERC 2014 Regulations).

FORM 7

Details of Project Specific Loans

Name of the Company TSGENCO

Name of the Power Station KTPS-Stage-VII

Amount in Lakhs

Particulars	Package1	Package2	Package3
1	2	3	4
Source of Loan ¹	REC Ltd.,	REC Ltd.,(for FGD)	REC Ltd.,(additional Loan)
Currency ²	Indian Rupee	Indian Rupee	Indian Rupee
Amount of Loan sanctioned	432141.00	27822.00	52465.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	396946.32	0.00	0.00
Interest Type ⁶	Floating	Floating	Floating
Fixed Interest Rate, if applicable			
Base Rate, if Floating Interest ⁷	10.44%	11.90%	11.90%
Margin, if Floating Interest ⁸	No	No	No
Are there any Caps/Floor ⁹			
If above is yes,specify caps/floor			
Moratorium Period ¹⁰	51 months	2 years	-
Moratorium effective from	31.03.15	-	-
Repayment Period ¹¹	12 Years	10 years	-
Repayment effective from	31.07.2019	0	-
Repayment Frequency ¹²	Monthly	Quarterly	-
Repayment Instalment ^{13,14}	144	40	-
Base Exchange Rate ¹⁶	Not applicable	Not applicable	Not applicable

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	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Depreciation on Capital Cost	4605.02	4857.19	5520.86	5979.50	6211.28
Depreciation recovered during the Year	243.14	256.46	291.50	315.72	327.96
Depreciation & Advance against Depreciation recovered during the year	243.14	256.46	291.50	315.72	327.96
Cumulative Depreciation & Advance against Depreciation recovered upto the year	307.09	563.55	855.05	1170.77	1498.73

**PART-I
FORM- 12**

Depreciation

Name of the Company
Name of the Power Station

TSGENCO
KTPS VII

Amount in Crs

2019-20		KTPS VII		
Sl.No	Asset Name	Gross Block as on 01.04.2019 or as on COD whichever is later	Additoin	Deprecitiaon amount
1	LAND AND LAND RIGHTS	0.00	0.00	0.00
2	LAND DEPOSITS	0.00	0.00	0.00
3	BUILDINGS	179.15	3.02	6.05
4	PLANT AND MACHINERY	4,148.40	173.28	225.24
5	HYDRAULIC WORKS	239.06	2.18	12.68
6	OTHER CIVIL WORKS	38.26	0.20	1.28
7	FURNITURE AND FIXTURES	0.32	0.19	0.02
8	VEHICLES	0.20	0.96	0.05
9	COMPUTERS	0.19	0.22	0.04
10	OTH.FIXED ASSETS & CAPITAL SPARES.	0.00	0.00	0.00
11	OFFICE EQUIPMENT	0.38	0.26	0.04
		4,605.97	180.31	245.39

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company TELANAGANA STATE POWER GENERATION CORPORATION LIMITED
Name of the Power Station Kothagudem Thermal Power Station-Stage VII

(Amount in lakhs)

Sl. No.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
	2	3	5	6	7	8	9
1	Loan-1 (REC)	432141.00					
	Gross loan - Opening	396946.32	396946.32	420409.32	432141.00	432141.00	432141.00
	Cumulative repayments of Loans upto previous year		0.00	25399.00	61474.00	97637.00	133800.00
	Net loan - Opening		396946.32	395010.32	370667.00	334504.00	298341.00
	Add: Drawal(s) during the Year		23463.00	11731.68	0	0	0
	Less: Repayment (s) of Loans during the year		25399.00	36075.00	36163.00	36163.00	36163.00
	Net loan - Closing		395010.32	370667.00	334504.00	298341.00	262178.00
	Average Net Loan		395010.32	370667.00	334504.00	298341.00	262178.00
	Rate of Interest on Loan		10.44%				
	Interest on loan		40482.00	40382.00	36826.00	33065.00	29304.00
2	REC Ltd., (For FGD)	27,822.00					
	Gross loan - Opening	0.00	0.00	10,000.00	27,822.00	27,822.00	27,822.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	696.00	3,478.00
	Net loan - Opening		0.00	10,000.00	27,822.00	27,126.00	24,344.00
	Add: Drawal(s) during the Year		10,000.00	17,822.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		0.00	0.00	696.00	2,782.00	2,782.00
	Net loan - Closing		10,000.00	27,822.00	27,126.00	24,344.00	21,562.00
	Average Net Loan		10,000.00	27,822.00	27,126.00	24,344.00	21,562.00
	Rate of Interest on Loan		11.90%				
	Interest on loan		99.00	2162.00	3311.00	3104.00	2773.00
3	Loan (REC)(for additional loan)	52,465.00					
	Gross loan - Opening	0.00	0.00	0.00	52,465.00	52,465.00	52,465.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	2,598.00	7,463.00	12,328.00
	Net loan - Opening		0.00	0.00	49,867.00	45,002.00	40,137.00
	Add: Drawal(s) during the Year		0.00	52,465.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		0.00	2,598.00	4,865.00	4,865.00	4,865.00
	Net loan - Closing		0.00	49,867.00	45,002.00	40,137.00	35,272.00
	Average Net Loan		0.00	49,867.00	45,002.00	40,137.00	35,272.00
	Rate of Interest on Loan						
	Interest on loan		0.00	2,768.00	5,669.00	5,090.00	4,511.00

PART-I
FORM- 13A

Name of the Company

TSGENCO

Name of the Power Station

KTPS-VII

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	19.39%	19.39%	19.39%	19.39%	19.39%
Equity	571.61	499.99	473.74	1058.12	1412.29
RoE	110.82	96.94	91.85	205.14	273.80
Interest and Finance charges on loan					
Interest rate	10.69%	10.69%	10.69%	10.69%	10.69%
Loan	3969.46	4050.10	4483.56	4066.32	3628.22
Interest on loan	424.34	432.96	479.29	434.69	387.86
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	601.33	604.46	620.39	639.19	649.18
IWC	72.46	72.84	74.76	77.02	78.23
Total (RoE+Int on loan+IWC)	607.62	602.73	645.90	716.85	739.89

PART-I
FORM- 14

Working Capital
TSGENCO
KTPS-VII

Name of the Company
Name of the Power Station

(Amount in Crores)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	126.93	126.58	126.58	126.58	126.93
2	O & M expenses	14.58	15.10	15.63	16.18	16.74
3	Maintenance Spares	35.00	36.23	37.52	38.82	40.19
4	Recievables	424.82	426.55	440.66	457.61	465.32
	Total Working Capital	601.33	604.46	620.39	639.19	649.18

**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.		Unit	For preceeding 3rd Month	For preceeding 2nd Month	For preceeding 1st Month
1	Quantity of Coal/Lignite supplied by Coal/Lignite Company	(MMT)	0.00	0.00	7532.28
4	Normative Transit & Handling Losses (For coal/Lignit based Projects)	(MMT)	0.00	0.00	60.26
14	Total amount Charged for coal/lignite supplied including Transportation (8+13)	(Rs.)			
	weighted average price	(Rs./MT)	4767.90	4767.90	4788.79
15	Weighted average GCV of coal/ Lignite as fired	(kCal/Kg)	4203	4203	4203

ANNEXURE -A15
Summary Sheet

PART-I
FORM- 1

Name of the Company

TSGenco

Name of the Power Station :

BTPS(4x270MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	0.00	60.84	361.11	561.16	557.67
1.2	Interest and Finance charges on loan	0.00	222.42	794.97	748.72	689.27
1.3	Interest on working Capital	0.00	40.22	121.61	126.88	126.68
1.4	Depreciation	0.00	117.31	465.86	525.86	525.86
1.5	O & M Expenses	0.00	161.77	457.62	473.82	490.41
	Total	0.00	602.56	2201.16	2436.44	2389.89
2.Calculation of Rate of Energy Charge(Rs./kWh)¹						
2.1	Rate of Energy Charge from Primary Fuel (REC) ^{p²}	2.53	2.53	2.53	2.53	2.53
2.2	Rate of Energy Charge from Secondary Fuel (REC)	0.02	0.02	0.02	0.02	0.02
2.3	Rate of Energy Charge ex-bus(REC) ^{3A,3B,3C}	2.55	2.55	2.55	2.55	2.55

*Weighted average variable charge for FY 2019-20 KTPS VII is proposed in respect of BTPS.

Plant Characteristics

Name of the Company TSGENCO

Name of the Power Station Bhadradi Thermal Power station (4X270MW)

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. Opacity meters are provided for SPM measurement

Any other special features

Fuel Details⁵	Primary Fuel	Primary Fuel	Secondary Fuel	Alternate Fuels
	Coal	Coal	Heavy Oil/ Light Diesel Oil	
Details	Module number or Unit			
Unit No.	Unit-I	Unit-II		
Installed Capacity (IC)	1x270MW	1x270MW		
Date of Commercial Operation (COD)	05.06.2020	07.12.2020		
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 & Turbine driven	Motor driven & Turbine driven		

* Proposed CODs :Unit-III (Jan 2021) & Unit -IV (Mar 2021)

**PART-I
FORM-3**

Normative parameters considered for tariff computations

Name of the Company **TSGENCO**

Name of the Power Station **BTPS (4X270MW)**

BTPS(4x270MW)

Particulars	Unit	As per filings	As per TSERC norms
		2019-24	1of 2019
-1		2	3
Rate of Return on Equity	%	15.5	15.5
Target Availability	%	85.00%	85.00%
Target PLF	%	85.00%	85.00%
Auxiliary Energy Consumption	%	8.5	8.5
Gross Station Heat Rate	kCal/kWh	2375.285	2375.285
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 WC¹	in Months	1	1
Cost of Secondary Fuel Oil for WC¹	in Months	1	1
Fuel Cost for WC²	in Months		
Liquid Fuel Stock for WC²	in Months		
O & M Expenses for WC	in Months	1	1
Maintenance Spares for WC	%	20% of O&M	20% of O&M
Receivables for WC	in Months	2	2
Prime lending Rate of SBI as on 01.04.2019	%	8.55%	8.55%
Incentive Rate	Paise / kWh	50	50

FORM 7

Details of Project Specific Loans

Name of the Company **TSGENCO**

Name of the Power Station **BTPS (4X270MW)**

BTPS(4x270MW)

Particulars	Package1	Package2
1	2	3
Source of Loan ¹	PFC Ltd.,	PFC Ltd., (for FGD)
Currency ²	Indian Rupee	Indian Rupee
Amount of Loan sanctioned	637301.00	61749.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	397513.76	0.00
Interest Type ⁶	Floating	Floating
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷	11.65% &12.15%	11.80%
Margin, if Floating Interest ⁸	No	No
Are there any Caps/Floor ⁹		
If above is yes,specify caps/floor		
Moratorium Period ¹⁰	5 years 3 months	-
Moratorium effective from	30.06.15	
Repayment Period ¹¹	15 years	10 years
Repayment effective from	15.10.2020	-
Repayment Frequency ¹²	Quarterly	Monthly
Repayment Instalment ^{13,14}	60	180
Base Exchange Rate ¹⁶	Not applicable	Not applicable

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

BTPS

BTPS(4x270MW)			Amount in Rs. Crs.		
Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Depreciation on Capital Cost	0.00	0.00	6073.05	8823.04	9959.43
Depreciation recovered during the Year	0.00	117.31	465.86	525.86	525.86
Depreciation & Advance against Depreciation recovered during the year	0.00	117.31	465.86	525.86	525.86
Cumulative Depreciation & Advance against Depreciation recovered upto the year	0.00	117.31	583.16	1109.02	1634.88

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company TELANAGANA STATE POWER GENERATION CORPORATION LIMITED
Name of the Power Station Bhadradri Thermal BTPS(4x270MW)

Amount in lakhs

Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
2	3	5	6	7	8	9
Loan-1 (PFC Ltd.,)	637301.00					
Gross loan - Opening	397513.76	397513.76	492094.76	637300.76	637301.00	637301.00
Cumulative repayments of Loans upto previous year		0.00	0.00	20745.00	63266.00	105787.00
Net loan - Opening		397513.76	492094.76	616555.76	574035.00	531514.00
Add: Drawal(s) during the Year		94581.00	145206.00	0	0	0
Less: Repayment (s) of Loans during the year		0.00	20745.00	42521.00	42521.00	42521.00
Net loan - Closing		492094.76	616555.76	574034.76	531514.00	488993.00
Average Net Loan		492094.76	616555.76	574034.76	531514.00	488993.00
Rate of Interest on Loan		11.65% & 12.15%				
Interest on loan		49590.00	67041.00	70017.00	65054.00	60105.00

Loan 2 PFC Ltd., (For FGD)	61,749.00					
Gross loan - Opening	0.00	0.00	26,667.00	61,749.00	61,749.00	61,749.00
Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	1,029.00	5,146.00
Net loan - Opening		0.00	26,667.00	61,749.00	60,720.00	56,603.00
Add: Drawal(s) during the Year		26,667.00	35,082.00	0.00	0.00	0.00
Less: Repayment (s) of Loans during the year		0.00	0.00	1,029.00	4,117.00	4,117.00
Net loan - Closing		26,667.00	61,749.00	60,720.00	56,603.00	52,486.00
Average Net Loan		26,667.00	61,749.00	60,720.00	56,603.00	52,486.00
Rate of Interest on Loan		11.80%				
Interest on loan		634.00	5646.00	7277.00	6944.00	6475.00

PART-I
FORM- 13A

Name of the Company

TSGENCO

Name of the Power Station

BTPS (4X270MW)

BTPS(4x270MW)

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	0.00	885.43	1922.68	2987.83	2969.24
RoE	0.00	60.84	361.11	561.16	557.67
Interest and Finance charges on loan					
Interest rate	11.72%	11.72%	11.72%	11.72%	11.72%
Loan	0.00	5187.62	6783.05	6388.44	5881.17
Interest on loan	0.00	222.42	794.97	748.72	689.27
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	0.00	912.46	1009.18	1052.98	1051.33
IWC	0.00	40.22	121.61	126.88	126.68
Total (RoE+Int on loan+IWC)	0.00	323.48	1277.69	1436.77	1373.63

PART-I
FORM- 14

Working Capital

Name of the Company TSGENCO

Name of the Power Station BTPS(4x270MW)

(Amount in Crores)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	170.89	170.89	170.89	171.35
2	O & M expenses	0.00	36.85	38.13	39.48	40.87
3	Maintenance Spares	0.00	88.44	91.52	94.76	98.08
4	Recievables	0.00	616.29	708.63	747.85	741.02
	Total Working Capital	0.00	912.46	1009.18	1052.98	1051.33

PART-I**ANNEXURE 16****FORM- 1****Summary Sheet****Name of the Company****TSGENCO****Name of the Power Station :****Nagarjuna Sagar complex(Main & Left)(875.6MW)**

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	116.89	116.89	116.89	116.89	116.89
1.2	Interest and Finance charges on loan	58.60	51.65	44.70	37.74	30.79
1.3	Interest on working Capital	10.45	10.57	10.70	10.85	11.01
1.4	Depreciation	65.11	65.11	65.11	65.11	65.11
1.5	O & M Expenses	112.14	117.47	123.08	128.99	135.22
	Total	363.19	361.68	360.47	359.58	359.02

NAME OF COMPANY : TSGENCO**NAME OF POWER STATION : NAGARJUNA SAGAR COMPLEX****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 X100.8 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 Cumecs (5156 Cusecs) |

III. COMMISSIONING DETAILS

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

1. 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 | : 27 th September' 1992 |
| Unit – 2 | : 27 th 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.) |

**PART-I
FORM- 7**

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

Nagarjuna Sagar complex

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 31.03.2019/COD ^{3,4,5,13,15}	2668.00
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	10.68%
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	Monthly
Repayment Instalment ^{13,14}	85*
Base Exchange Rate ¹⁶	Not Applicable

Name of the Company

TSGENCO

Name of the Power Station

Nagarjuna Sagar Tailpond
Dam

Particulars	Package1
1	2
Source of Loan ¹	PFC Ltd.,
Currency ²	Indian Rupee
Amount of Loan sanctioned	67486.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	56673.00
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	3 years
Moratorium effective from	08.01.08
Repayment Period ¹¹	20 years
Repayment effective from	15.10.11
Repayment Frequency ¹²	Monthly
Repayment Instalment ^{13,14}	196*
Base Exchange Rate ¹⁶	Not Applicable

* From Feb'17 onwards loan repayment pertaining to PFC converted from Quarterly to monthly. The above installments are the total of both quarterly and monthly

Statement of Depreciation

Name of the Company **TSGENCO**

Name of the Power Station **NAGARJUNA SAGAR COMPLEX**

Rs in Crs

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation on Capital Cost	1948.75	1948.75	1948.75	1948.75	1948.75
Depreciation recovered during the Year	65.11	65.11	65.11	65.11	65.11
Depreciation & Advance against Depreciation recovered during the year	65.11	65.11	65.11	65.11	65.11
Cumulative Depreciation & Advance against Depreciation recovered upto the year	880.52	945.63	1010.74	1075.85	1140.96

**PART-I
FORM- 12**

Name of the Company	Depreciation	
Name of the Power Station	TSGENCO	
	NSHES	
		Rs.In Cr

2019-20 Hydel Plants			NSHES		
Sl. No	Asset Name	Depreciation Rate as per	Gross Block as on	Additoin	Deprecitiaon amount
1	LAND AND LAND RIGHTS	0.00%	0.02	0.00	0.00
2	LAND DEPOSITS	0.00%	0.00	0.00	0.00
3	BUILDINGS	3.02%	49.45	0.00	0.49
4	PLANT AND MACHINERY	3.40%	1,010.65	0.00	18.71
5	HYDRAULIC WORKS	3.40%	829.68	0.00	70.71
6	OTHER CIVIL WORKS	3.02%	8.59	0.30	0.33
7	FURNITURE AND FIXTURE	12.77%	0.80	0.07	0.03
8	VEHICLES	33.40%	0.14	0.00	0.00
9	COMPUTERS	33.40%	0.63	0.07	0.01
10	FIXED ASSET-TR. FROM		40.50	0.00	0.00
11	OTH.FIXED ASSETS &	3.40%	0.59	0.00	0.05
12	OFFICE EQUIPMENT	12.77%	0.66	0.07	0.03
			1,941.71	0.51	90.37

Calculation of Weighted Average Rate of Interest on Actual Loans¹

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
Nagarjuna Sagar HES

(Amount in lakhs)

Sl. no.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
	Loan-1 (PFC)	2668.00					
	Gross loan - Opening	591.04	2668.00	2668.00	2668.00		
	Cumulative repayments of Loans upto previous year		2076.96	2330.26	2583.56		
	Net loan - Opening		591.04	337.74	84.44		
	Add: Drawal(s) during the Year		0.00	0.00	0.00		
	Less: Repayment (s) of Loans during the year		253.30	253.30	84.44		
	Net loan - Closing		337.74	84.44	0.00		
	Average Net Loan		337.74	84.44	0.00		
	Rate of Interest on Loan		10.68%				
	Interest on loan		51.00	24.00	19.00		

Calculation of Weighted Average Rate of Interest on Actual Loans¹

FORM- 13

Name of the Company
Name of the Power Station

TELANAGANA STATE POWER GENERATION CORPORATION LIMITED
Nagarjuna Sagar Tailpond Dam

(Amount in lakhs)

Sl. no.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
	Loan-1 (PFC)	67486.00					
	Gross loan - Opening	56673.00	56673.00	56673.00	56673.00	56673.00	56673.00
	Cumulative repayments of Loans upto previous year		17998.18	21133.97	24269.76	27405.55	30541.34
	Net loan - Opening		38674.82	35539.03	32403.24	29267.45	26131.66
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
			3135.79	3135.79	3135.79	3135.79	3135.79
	Less: Repayment (s) of Loans during the year						
	Net loan - Closing		35539.03	32403.24	29267.45	26131.66	22995.87
	Average Net Loan		35539.03	32403.24	29267.45	26131.66	22995.87
	Rate of Interest on Loan		10.68%				
	Interest on loan		3988.00	3643.00	3308.00	2973.00	2645.00

PART-I
FORM- 13A

Name of the Company

TSGENCO

Name of the Power Station

NAGARJUNASAGAR COMPLEX

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	19.99%	19.99%	19.99%	19.99%	19.99%
Equity	584.62	584.62	584.62	584.62	584.62
RoE	116.89	116.89	116.89	116.89	116.89
Interest and Finance charges on loan					
Interest rate	10.68%	10.68%	10.68%	10.68%	10.68%
Loan	548.72	483.61	418.50	353.39	288.28
Interest on loan	58.60	51.65	44.70	37.74	30.79
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	86.70	87.69	88.80	90.03	91.39
IWC	10.45	10.57	10.70	10.85	11.01
Total (RoE+Int on loan+IWC)	185.94	179.10	172.28	165.48	158.69

**PART-I
FORM- 14**

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

NAGARJUNASAGAR COMPLEX

(Amount in Crs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	9.35	9.79	10.26	10.75	11.27
3	Maintenance Spares	16.82	17.62	18.46	19.35	20.28
4	Recievables	60.53	60.28	60.08	59.93	59.84
	Total Working Capital	86.70	87.69	88.80	90.03	91.39

ANNEXURE-A17
Summary Sheet

FORM- 1

Name of the Company

TSGENCO

Name of the Power Station :

SLBPH(6X150MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	202.49	202.49	202.49	202.49	202.49
1.2	Interest and Finance charges on loan	103.72	96.20	88.67	81.15	73.62
1.3	Interest on working Capital	12.14	12.21	12.29	12.38	12.49
1.4	Depreciation	60.20	60.20	60.20	60.20	60.20
1.5	O & M Expenses	94.06	98.59	103.37	108.40	113.70
	Total	472.61	469.69	467.02	464.62	462.50

NAME OF COMPANY : TSGENCO

NAME OF POWER STATION : SRISAILAM LEFT BANK POWER STATION

SALIENT FEATURES OF HYDROELECTRIC PROJECT**I. GENERAL**

1. Location : Srisailam, 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 : Srisailam Dam, across Krishna River in Nandi Kotkur, Kurnool District, Andhra Pradesh.
7. No. of Units : SIX
8. Design Energy (in Mu) : **1000 MU**

II. HYDROLOGY:

1. Reservoir : Srisailam
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
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)**
Rated normal current : **2000A**
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 : **90° C**
g) Max. Permissible Temp. during emergency : **105° C**
h) Max. Permissible Temp. during short circuit : **230° C**
i) No. of Conductors : **1 No.**
j) Standards : **IEC-840**

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

SLBPH

Rs in Lakhs

Particulars	Package1
1	2
Source of Loan ¹	PFC
Currency ²	Indian Rupee
Amount of Loan sanctioned	11500
Amount of Gross Loan drawn	10540.58
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	12.10%
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	

Statement of Depreciation

Name of the Company **TSGENCO**

Name of the Power Station **SLBHES**

Rs in Crs

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation on Capital Cost	3376.06	3376.06	3376.06	3376.06	3376.06
Depreciation recovered during the Year	60.20	60.20	60.20	60.20	60.20
Depreciation & Advance against Depreciation recovered during the year	60.20	60.20	60.20	60.20	60.20
Cumulative Depreciation & Advance against Depreciation recovered upto the year	1593.67	1653.87	1714.07	1774.27	1834.47

**PART-I
FORM- 12**

Depreciation

Name of the Company

TSGENCO

Name of the Power Station

SLBHES

Amount in Crs

2019-20 Hydel Plants		SLBHES		
Sl. No	Asset Name	Gross Block as on 01.04.2019 or as on COD whichever is later	Additoin	Deprecitiaon amount
1	LAND AND LAND RIGHTS	0.30	0.00	0.00
2	LAND DEPOSITS	0.00	0.00	0.00
3	BUILDINGS	434.68	0.00	14.20
4	PLANT AND MACHINERY	2,486.72	0.00	77.56
5	HYDRAULIC WORKS	431.27	0.00	13.84
6	OTHER CIVIL WORKS	14.62	0.00	0.62
7	FURNITURE AND FIXTURE	0.55	0.12	0.03
8	VEHICLES	0.56	0.00	0.00
9	COMPUTERS	0.60	0.01	0.00
10	FIXED ASSET-TR. FROM	0.00	0.00	0.00
11	OTH.FIXED ASSETS &	3.01	0.00	0.12
12	OFFICE EQUIPMENT	1.12	0.12	0.03
		3,373.43	0.24	106.39

FORM- 14

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
 SLBPH

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
	2	3	4	5	6	7	8
1	Loan-1 (PFC)						
	Gross loan - Opening						
	Cumulative repayments of Loans upto previous year						
	Net loan - Opening						
	Add: Drawal(s) during the Year						
	Less: Repayment (s) of Loans during the year						
	Net loan - Closing						
	Average Net Loan						
	Rate of Interest on Loan						
	Interest on loan						

Name of the Company

TSGENCO

Name of the Power Station

SLBPH

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	19.99%	19.99%	19.99%	19.99%	19.99%
Equity	1012.82	1012.82	1012.82	1012.82	1012.82
RoE	202.49	202.49	202.49	202.49	202.49
Interest and Finance charges on loan					
Interest rate	12.50%	12.50%	12.50%	12.50%	12.50%
Loan	829.77	769.57	709.37	649.17	588.97
Interest on loan	103.72	96.20	88.67	81.15	73.62
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	100.72	101.29	101.96	102.73	103.61
IWC	12.14	12.21	12.29	12.38	12.49
Total (RoE+Int on loan+IWC)	318.35	310.90	303.45	296.02	288.60

PART-I
FORM- 14

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

SLBPH

(Amount in Cr)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	7.84	8.22	8.61	9.03	9.47
3	Maintenance Spares	14.11	14.79	15.51	16.26	17.05
4	Recievables	78.77	78.28	77.84	77.44	77.08
	Total Working Capital	100.72	101.29	101.96	102.73	103.61

ANNEXURE-A18
Summary Sheet

FORM- 1

Name of the Company

TSGENCO

Name of the Power Station :

SMALL HYDEL STATIONS(54MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	7.03	7.26	7.26	6.76	6.14
1.2	Interest and Finance charges on loan	1.00	0.46	0.08	0.00	0.00
1.3	Interest on working Capital	2.05	2.13	2.22	2.32	2.41
1.4	Depreciation	3.10	3.10	3.10	3.10	3.10
1.5	O & M Expenses	36.99	38.88	40.87	42.96	45.17
	Total	50.16	51.83	53.53	55.14	56.83

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 | : 20 th February' 1987 |
| Unit – 2 | : 22 nd September' 1987 |
| Unit – 3 | : 28 th March' 1988 |

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.**

- 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**

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

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	:	0.8Lagging
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.

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 are 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

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	Package1
1	2
Source of Loan ¹	
Currency ²	
Amount of Loan sanctioned	
Amount of Gross Loan drawn upto 31.03.2019/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	

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

SMALL HYDEL

(Rs in Crs.)

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24	
Depreciation on Capital Cost	121.02	121.02	121.02	121.02	121.02	
Depreciation recovered during the Year	3.10	3.10	3.10	3.10	3.10	
Depreciation & Advance against Depreciation recovered during the year	3.10	3.10	3.10	3.10	3.10	
Cumulative Depreciation & Advance against Depreciation recovered upto the year	81.00	84.10	87.20	90.30	93.40	

**PART-I
FORM- 12**

Depreciation

Name of the Company

TSGENCO

Name of the Power Station

SMALL HYDEL

Amount in Crs

2019-20 Hydel Plants		Mini Hydel		
Sl.No	Asset Name	Gross Block as on 01.04.2019 or as	Additoin	Deprecitiaon amount
1	LAND AND LAND RIGHTS	0.26	0.00	0.00
2	LAND DEPOSITS	0.02	0.00	0.00
3	BUILDINGS	15.49	0.00	0.56
4	PLANT AND MACHINERY	106.48	0.81	2.56
5	HYDRAULIC WORKS	15.22	0.00	0.56
6	OTHER CIVIL WORKS	10.93	0.00	0.37
7	FURNITURE AND FIXTURES	0.50	0.16	0.02
8	VEHICLES	0.21	0.00	0.00
9	COMPUTERS	0.24	0.02	0.01
10	FIXED ASSET-TR. FROM NSTPD	0.00	0.00	0.00
11	OTH.FIXED ASSETS & CAPITAL	0.00	0.00	0.00
12	OFFICE EQUIPMENT	0.02	0.14	0.01
		149.37	1.13	4.08

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

PART-I
FORM- 13A

Name of the Company TSGENCO

Name of the Power Station SMALL HYDEL

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	19.99%	19.99%	19.99%	19.99%	19.99%
Equity	35.16	36.31	36.31	33.82	30.72
RoE	7.03	7.26	7.26	6.76	6.14
Interest and Finance charges on loan					
Interest rate	12.50%	12.50%	12.50%	12.50%	12.50%
Loan	7.96	3.71	0.61	0.00	0.00
Interest on loan	1.00	0.46	0.08	0.00	0.00
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	16.99	17.71	18.46	19.22	20.01
IWC	2.05	2.13	2.22	2.32	2.41
Total (RoE+Int on loan+IWC)	10.07	9.86	9.56	9.08	8.55

PART-I
FORM- 14

Working Capital

Name of the Company **TSGENCO**

Name of the Power Station **SMALLHYDEL(54MW)**

(Amount in Crs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	3.08	3.24	3.41	3.58	3.76
3	Maintenance Spares	5.55	5.83	6.13	6.44	6.78
4	Recievables	8.36	8.64	8.92	9.19	9.47
	Total Working Capital	16.99	17.71	18.46	19.22	20.01

ANNEXURE -A19**FORM- 1****Summary Sheet****Name of the Company** **TSGENCO****Name of the Power Station :** **Mini hydels (9.16MW)**

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	1.77	1.77	1.77	1.77	1.77
1.2	Interest and Finance charges on	0.58	0.44	0.31	0.17	0.03
1.3	Interest on working Capital	0.38	0.39	0.41	0.42	0.44
1.4	Depreciation	1.09	1.09	1.09	1.09	1.09
1.5	O & M Expenses	6.27	6.59	6.93	7.29	7.66
	Total	10.09	10.28	10.50	10.73	10.99

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 Hydrel 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

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

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)

1	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	

PART-I
FORM- 11

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

MINIHYDELS

Amount Rs in Crs.

1	2	3	4	5	6
Depreciation on Capital Cost	31.35	31.35	31.35	31.35	31.35
Depreciation recovered during the Year	1.09	1.09	1.09	1.09	1.09
Depreciation & Advance against Depreciation recovered during the year	1.09	1.09	1.09	1.09	1.09
Cumulative Depreciation & Advance against Depreciation recovered upto the year	18.41	19.50	20.59	21.68	22.77

Name of the Company **TSGENCO**
Name of the Power Station : **Mini hydels**

2019-20 Hydrel Plants			7701 Mini Hydrel		
Sl.No	Asset Name	Depreciation Rate as per MoP Depreciation rate schedule.	Gross Block as on 01.04.2019 or as on COD whichever is later	Additions	Depreciation amount
1	LAND AND LAND RIGHTS				
2	LAND DEPOSITS				
3	BUILDINGS				
4	PLANT AND MACHINERY				
5	HYDRAULIC WORKS				
6	OTHER CIVIL WORKS				
7	FURNITURE AND FIXTURES				
8	VEHICLES				
9	COMPUTERS				
10	FIXED ASSET-TR. FROM NSTPD DE-MERGER PLAN-PROV.				
11	OTH.FIXED ASSETS & CAPITAL SPARES.				
12	OFFICE EQUIPMENT				

* Mini Hydrel (Peddapally) assets and depreciation details were included in small Hydrel.

FORM 13A

Name of the Company

TSGENCO

Name of the Power Station

MINIHYDELS

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	9.40	9.40	9.40	9.40	9.40
RoE	1.77	1.77	1.77	1.77	1.77
Interest and Finance charges on loan					
Interest rate	12.50%	12.50%	12.50%	12.50%	12.50%
Loan	4.62	3.53	2.44	1.35	0.26
Interest on loan	0.58	0.44	0.31	0.17	0.03
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	3.15	3.25	3.37	3.49	3.62
IWC	0.38	0.39	0.41	0.42	0.44
Total (RoE+Int on loan+IWC)	2.72	2.60	2.48	2.36	2.24

PART-I
FORM- 14

Working Capital

Name of the Company

TSGENCO

Name of the Power Station

MINIHYDELS(9.16MW)

(Amount in Crs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	0.52	0.55	0.58	0.61	0.64
3	Maintenance Spares	0.94	0.99	1.04	1.09	1.15
4	Recievables	1.68	1.71	1.75	1.79	1.83
	Total Working Capital	3.15	3.25	3.37	3.49	3.62

ANNEXURE A20
Summary Sheet

FORM- 1

Name of the Company **TSGENCO**

Name of the Power Station : **Pochampad-II (9MW)**

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	1.78	1.78	1.78	1.78	1.78
1.2	Interest and Finance charges	1.27	1.11	0.95	0.79	0.64
1.3	Interest on working Capital	0.40	0.41	0.42	0.44	0.43
1.4	Depreciation	1.57	1.57	1.57	1.57	0.44
1.5	O & M Expenses	6.17	6.48	6.81	7.16	7.53
	Total	11.19	11.36	11.54	11.75	10.82

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 |
|--------|---|---------------------------|

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 TECHICAL 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-**
- 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**

4 Transmission Line

- : **132 KV Single circuit, from PH to 132KV Sub-Station at Pochampad**

5 Different Elevations

- Inspection gallery : **301.75m**
- Drinage 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)**

Details of Project Specific Loans

Name of the Company TSGENCO
Name of the Power Station Sri Ram Sagar

(Amount in lacs)

Particulars	Package1
1	2
Source of Loan ¹	Dhana laxmi Bank Ltd.,
Currency ²	Indian Rupee
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

**PART-I
FORM- 11**

Statement of Depreciation

Name of the Company

TSGENCO

Name of the Power Station

Pochampad-II

Rs in Crores

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	3	4	5	6	
Depreciation on Capital Cost	29.74	29.74	29.74	29.74	29.74
Depreciation recovered during the Year	1.57	1.57	1.57	1.57	0.44
Depreciation & Advance against Depreciation recovered during the year	1.57	1.57	1.57	1.57	0.44
Cumulative Depreciation & Advance against Depreciation recovered upto the year	9.81	11.38	12.95	14.52	14.96

Name of the Company
Name of the Power Station :

TSGENCO
Pochampad-II (9MW)

(Rs in Crs)

Description	BALANCE AS ON 01.06.2019	RATE OF DEP		
LAND AND LAND RIGHTS	0.00%	0.00	0.00	0.00
LAND DEPOSITS	0.00%	0.00	0.00	0.00
BUILDINGS	3.02%	3.67	0.00	0.19
PLANT AND MACHINERY	3.40%	0.00	0.00	0.00
HYDRAULIC WORKS	3.40%	26.48	0.00	1.40
OTHER CIVIL WORKS	3.02%	0.00	0.00	0.00
FURNITURE AND FIXTURES	12.77%	0.00	0.00	0.00
VEHICLES	33.40%	0.00	0.00	0.00
COMPUTERS	33.40%	0.00	0.00	0.00
FIXED ASSET-TR. FROM NSTPD DE-MERGER PLAN-PROV.		0.00	0.00	0.00
OTH.FIXED ASSETS & CAPITAL SPARES.	3.40%	0.00	0.00	0.00
OFFICE EQUIPMENT	12.77%	0.00	0.00	0.00
		30.15	0.00	1.58

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
POCHAMPAD-II

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
	2	3	5	6	7	8	9
1	Loan-1 (Dhana Laxmi Bank Ltd.,						
	Gross loan - Opening						
	Cumulative repayments of Loans upto previous year						
	Net loan - Opening						
	Add: Drawal(s) during the Year						
	Less: Repayment (s) of Loans during the year						
	Net loan - Closing						
	Average Net Loan						
	Rate of Interest on Loan						
	Interest on loan						

PART-I
FORM- 13A

Name of the Company TSGENCO

Name of the Power Station POCHAMPAD-II

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	19.99%	19.99%	19.99%	19.99%	19.99%
Equity	8.92	8.92	8.92	8.92	8.92
RoE	1.78	1.78	1.78	1.78	1.78
Interest and Finance charges on loan					
Interest rate	10.10%	10.10%	10.10%	10.10%	10.10%
Loan	12.57	11.00	9.43	7.86	6.29
Interest on loan	1.27	1.11	0.95	0.79	0.64
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	3.30	3.40	3.51	3.63	3.56
IWC	0.40	0.41	0.42	0.44	0.43
Total (RoE+Int on loan+IWC)	3.45	3.31	3.16	3.02	2.85

PART-I**FORM- 14****Working Capital**

Name of the Company TSGENCO

Name of the Power Station POCHAMPAD(9MW)-II

(Amount in Crs)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	0.51	0.54	0.57	0.60	0.63
3	Maintenance Spares	0.92	0.97	1.02	1.07	1.13
4	Recievables	1.86	1.89	1.92	1.96	1.80
	Total Working Capital	3.30	3.40	3.51	3.63	3.56

ANNEXURE -A21
Summary Sheet

FORM- 1

Name of the Company

TSGENCO

Name of the Power Station :

Priradarshini Jurala HES (6X39MW)

(Rs in Crs)

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	38.99	38.99	38.99	38.99	38.99
1.2	Interest and Finance charges on loan	29.98	26.08	22.18	18.27	14.37
1.3	Interest on working Capital	4.00	4.02	4.04	4.06	4.09
1.4	Depreciation	36.53	36.53	36.53	36.53	36.53
1.5	O & M Expenses	37.42	39.34	41.36	43.49	45.74
	Total	146.92	144.95	143.09	141.35	139.72

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 |

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.

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

Priradarshini Jurala HES(6X39MW)

Particulars	Package1
1	2
Source of Loan ¹	PFC Ltd.,
Currency ²	Inidan Ruppe
Amount of Loan sanctioned	43800.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	41221.00
Interest Type ⁶	Floating
Fixed Interest Rate, if applicable	
Base Rate, if Floating Interest ⁷	10.68%
Margin, if Floating Interest ⁸	NO
Are there any Caps/Floor ⁹	
If above is yes,specify caps/floor	
Moratorium Period ¹⁰	4 years
Moratorium effective from	06.10.04
Repayment Period ¹¹	15 years
Repayment effective from	15.07.09
Repayment Frequency ¹²	Monthly
Repayment Instalment ^{13,14}	119*
Base Exchange Rate ¹⁶	Not Applicable

* From Dec'16 onwards loan repayment pertaining to PFC converted from Quarterly to monthly. The above installments are the total of both quarterly and monthly

Statement of Depreciation**Name of the Company**

TSGENCO

Name of the Power Station

PJHES

Rs in Crs

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	5	6	7	8	
Depreciation on Capital Cost	691.91	691.91	691.91	691.91	691.91
Depreciation recovered during the Year	36.53	36.53	36.53	36.53	36.53
Depreciation & Advance against Depreciation recovered during the year	36.53	36.53	36.53	36.53	36.53
Cumulative Depreciation & Advance against Depreciation recovered upto the year	240.16	276.70	313.23	349.76	386.29

FORM 12

Name of the Company **TSGENCO**
 Name of the Power Station : **Priradarshini Jurala HES (6X39MW)**

Rs. in Crs

2019-20 Hydel Plants			7605 PJHES		
Sl.No	Asset Name	Depreciation Rate as per MoP Depreciation rate	Gross Block as on 01.04.2019 or as on COD	Additions	Depreciation amount
1	LAND AND LAND RIGHTS	0.00%	0.35	0.00	0.00
2	LAND DEPOSITS	0.00%	0.00	0.00	0.00
3	BUILDINGS	3.02%	212.87	0.00	7.11
4	PLANT AND MACHINERY	3.40%	451.96	0.07	24.35
5	HYDRAULIC WORKS	3.40%	1.14	0.00	0.06
6	OTHER CIVIL WORKS	3.02%	1.51	0.00	0.05
7	FURNITURE AND FIXTURE	12.77%	0.49	0.11	0.03
8	VEHICLES	33.40%	0.36	0.00	0.00
9	COMPUTERS	33.40%	0.37	0.05	0.01
10	FIXED ASSET-TR. FROM		0.00	0.00	0.00
11	OTH.FIXED ASSETS &	3.40%	24.95	0.00	1.32
12	OFFICE EQUIPMENT	12.77%	0.14	0.15	0.01
			694.16	0.37	32.93

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
Priyadarshini Jurala HEP

(Amount in lakhs)

Sl. no.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7	8
	Loan-1 (PFC)	43800.00					
	Gross loan - Opening	14253.58	41221.00	41221.00	41221.00	41221.00	41221.00
	Cumulative repayments of Loans upto previous year		26967.42	29771.40	32575.38	35379.36	38183.34
	Net loan - Opening		14253.58	11449.60	8645.62	5841.64	3037.66
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		2803.98	2803.98	2803.98	2803.98	2803.98
	Net loan - Closing		11449.60	8645.62	5841.64	3037.66	233.68
	Average Net Loan		11449.60	8645.62	5841.64	3037.66	233.68
	Rate of Interest on Loan		10.68%				
	Interest on loan		1389.00	1086.00	787.00	487.00	188.00

PART-I
FORM- 13A

Calculation of Return on Capital Employed

Name of the Company **TSGENCO**

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

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	207.57	207.57	207.57	207.57	207.57
RoE	38.99	38.99	38.99	38.99	38.99
Interest and Finance charges on loan					
Interest rate	10.68%	10.68%	10.68%	10.68%	10.68%
Loan	280.71	244.17	207.64	171.11	134.57
Interest on loan	29.98	26.08	22.18	18.27	14.37
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	33.22	33.34	33.50	33.71	33.96
IWC	4.00	4.02	4.04	4.06	4.09
Total (RoE+Int on loan+IWC)	72.97	69.08	65.20	61.32	57.45

PART-I
FORM- 14

Working Capital

Name of the Company **TSGENCO**

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

(Amount in Cr)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	3.12	3.28	3.45	3.62	3.81
3	Maintenance Spares	5.61	5.90	6.20	6.52	6.86
4	Recievables	24.49	24.16	23.85	23.56	23.29
	Total Working Capital	33.22	33.34	33.50	33.71	33.96

ANNEXURE-A22
Summary Sheet

FORM- 1

Name of the Company

TSGENCO

Name of the Power Station :

Lower Jurala HES(6X40MW)

Rs in Crs

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	48.38	47.73	55.40	55.72	53.82
1.2	Interest and Finance charges on loan	115.82	107.95	100.20	93.94	87.68
1.3	Interest on working Capital	6.48	6.38	6.51	6.50	6.44
1.4	Depreciation	82.15	82.42	85.09	86.58	87.52
1.5	O & M Expenses	29.03	30.49	32.08	33.73	35.45
	Total	281.86	274.97	279.28	276.46	270.91

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 m3/s |

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 | : | 218.75m3/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 |

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)

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company

TSGENCO

Particulars	Package1	Package2
1	2	3
Source of Loan ¹	PFC Ltd.,	SBH
Currency ²	Inidan Ruppe	Inidan Ruppe
Amount of Loan sanctioned	117281.00	15000.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	117281.00	15000.00
Interest Type ⁶	Floating	Floating
Fixed Interest Rate, if applicable		
Base Rate, if Floating Interest ⁷	10.68%	10.05%
Margin, if Floating Interest ⁸		
Are there any Caps/Floor ⁹	NO	Yes
If above is yes,specify caps/floor		
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	Monthly	Quarterly
Repayment Instalment ^{13,14}	240	40
Base Exchange Rate ¹⁶	Not Applicable	Not Applicable

Statement of Depreciation					
Name of the Company	TSGENCO				
Name of the Power Station	LJHES				
					Rs in Crs
Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation on Capital Cost	1555.90	1560.92	1611.59	1639.74	1657.61
Depreciation recovered during the Year	82.15	82.42	85.09	86.58	87.52
Depreciation & Advance against Depreciation recovered during the year	82.15	82.42	85.09	86.58	87.52
Cumulative Depreciation & Advance against Depreciation recovered upto the year	295.99	378.41	463.50	550.08	637.60

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

2019-20 Hydel Plants			7620 LJHES		
Sl.No	Asset Name	Depreciation Rate as per MoP	Gross Block as on 01.04.2019 or as on COD	Additoin	Deprecitiaon amount
1	LAND AND LAND RIGHTS	0.00%	5.19	0.00	0.00
2	LAND DEPOSITS	0.00%	0.00	0.00	0.00
3	BUILDINGS	3.02%	27.32	0.00	0.91
4	PLANT AND MACHINERY	3.40%	815.24	0.62	43.06
5	HYDRAULIC WORKS	3.40%	239.77	0.00	12.66
6	OTHER CIVIL WORKS	3.02%	733.18	3.85	24.62
7	FURNITURE AND FIXTURES	12.77%	0.24	0.06	0.01
8	VEHICLES	33.40%	0.08	0.00	0.00
9	COMPUTERS	33.40%	0.18	0.01	0.01
10	FIXED ASSET-TR. FROM NSTPD		0.00	0.00	0.00
11	OTH.FIXED ASSETS & CAPITAL	3.40%	0.00	0.00	0.00
12	OFFICE EQUIPMENT	12.77%	0.13	0.06	0.01
			1,821.33	4.59	81.28

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
Lower Jurala HEP

(Amount in lakhs)

Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
2	3	4	5	6	7	8
Loan-1 (PFC)	117281.00					
Gross loan - Opening	105550.51	117281.00	117281.00	117281.00	117281.00	117281.00
Cumulative repayments of Loans upto previous year		11730.49	17594.40	23458.31	29322.22	35186.13
Net loan - Opening		105550.51	99686.60	93822.69	87958.78	82094.87
Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
Less: Repayment (s) of Loans during the year		5863.91	5863.91	5863.91	5863.91	5863.91
Net loan - Closing		99686.60	93822.69	87958.78	82094.87	76230.96
Average Net Loan		99686.60	93822.69	87958.78	82094.87	76230.96
Rate of Interest on Loan						
Interest on loan		11017.00	10361.00	9735.00	9109.00	8505.00
		10.68%				
Loan (State Bank of India)	15000.00					
Gross loan - Opening	2893.16	15000.00	15000.00			
Cumulative repayments of Loans upto previous year		12106.84	13606.84			
Net loan - Opening		2893.16	1393.16			
Add: Drawal(s) during the Year		0.00	0.00			
Less: Repayment (s) of Loans during the year		1500.00	1393.16			
Net loan - Closing		1393.16	0.00			
Average Net Loan		1393.16	0.00			
Rate of Interest on Loan		10.05%				
Interest on loan		234.00	83.00			

PART-I
FORM- 13A

Name of the Company **TSGENCO**

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

(Amount in Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	18.78%	18.78%	18.78%	18.78%	18.78%
Equity	257.62	254.13	294.96	296.65	286.58
RoE	48.38	47.73	55.40	55.72	53.82
Interest and Finance charges on loan					
Interest rate	10.68%	10.68%	10.68%	10.68%	10.68%
Loan	1084.44	1010.80	938.23	879.59	820.95
Interest on loan	115.82	107.95	100.20	93.94	87.68
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	53.75	52.94	54.03	53.95	53.42
IWC	6.48	6.38	6.51	6.50	6.44
Total (RoE+Int on loan+IWC)	170.68	162.06	162.11	156.16	147.94

PART-I
FORM- 14

Working Capital

Name of the Company **TSGENCO**

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

(Amount in Cr)

Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	2.42	2.54	2.67	2.81	2.95
3	Maintenance Spares	4.35	4.57	4.81	5.06	5.32
4	Recievables	46.98	45.83	46.55	46.08	45.15
	Total Working Capital	53.75	52.94	54.03	53.95	53.42

ANNEXURE-A23**FORM- 1****Summary Sheet****Name of the Company****TSGENCO****Name of the Power Station :****PULICHINTALA HES(4X30MW)**

Rs. in Crs

S.No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1.1	Return on Equity	26.71	27.15	28.37	28.92	29.47
1.2	Interest and Finance charges on loan	31.42	29.36	28.27	26.20	24.07
1.3	Interest on working Capital	3.86	3.95	4.10	4.21	4.32
1.4	Depreciation	23.51	23.90	24.97	25.46	25.94
1.5	O & M Expenses	44.50	46.86	49.37	51.98	54.74
	Total	130.00	131.22	135.08	136.78	138.55

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
- e) Normal Speed : 125 RPM
- f) 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

PART-I
FORM- 7

Details of Project Specific Loans

Name of the Company

TSGENCO

Name of the Power Station

PULICHINTALA HES(4X30MW)

Particulars	Package1	Package2
1	2	3
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	11.75%	
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	

Statement of Depreciation**Name of the Company**

TSGENCO

Name of the Power Station**Capital cost as admitted by TSERC**

Rs. in Crs.

Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
1	5	6	7	8	
Depreciation on Capital Cost	445.31	452.65	472.94	482.21	491.36
Depreciation recovered during the Year	23.51	23.90	24.97	25.46	25.94
Depreciation & Advance against Depreciation recovered during the year	23.51	23.90	24.97	25.46	25.94
Cumulative Depreciation & Advance against Depreciation recovered upto the year	54.72	78.62	103.59	129.05	155.00

FORM 12

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

Rs. In Crs.

2019-20 Hydel Plants			7440 PCHES		
Sl.No	Asset Name	Depreciation Rate as per MoP	Gross Block as on 01.04.2019 or as on COD	Additoin	Deprecitiaon amount
1	LAND AND LAND RIGHTS	0.00%	0.78	0.00	0.00
2	LAND DEPOSITS	0.00%	0.00	0.00	0.00
3	BUILDINGS	3.02%	4.53	0.49	0.08
4	PLANT AND MACHINERY	3.40%	305.90	6.02	7.44
5	HYDRAULIC WORKS	3.40%	3.02	0.00	0.07
6	OTHER CIVIL WORKS	3.02%	200.75	2.62	4.76
7	FURNITURE AND FIXTURES	12.77%	0.61	0.01	0.03
8	VEHICLES	33.40%	0.68	0.15	0.00
9	COMPUTERS	33.40%	0.21	0.01	0.01
10	FIXED ASSET-TR. FROM NSTPD DE-MERGER PLAN-PROV.		0.00	0.00	0.00
11	OTH.FIXED ASSETS & CAPITAL SPARES.	3.40%	0.00	0.00	0.00
12	OFFICE EQUIPMENT	12.77%	0.17	0.00	0.01
			516.63	9.30	12.41

PART-I
FORM- 13

Calculation of Weighted Average Rate of Interest on Actual Loans¹

Name of the Company TELANAGANA STATE POWER GENERATION CORPORATION LIMITE
Name of the Power Station Pulichintala HEP

(Amount in lakhs)

Sl.No.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
	2	3	4	6	7	8	9
1	Loan-1 (Indian Overseas Bank)						
	Gross loan - Opening						
	Cumulative repayments of Loans upto previous year						
	Net loan - Opening						
	Add: Drawal(s) during the Year						
	Less: Repayment (s) of Loans during the year						
	Net loan - Closing						
	Average Net Loan						
	Rate of Interest on Loan						
	Interest on loan						

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 Crs)

Calculation of Return on Equity					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6
Interest rate	19.99%	19.99%	19.99%	19.99%	19.99%
Equity	133.59	135.79	141.88	144.66	147.41
RoE	26.71	27.15	28.37	28.92	29.47
Interest and Finance charges on loan					
Interest rate	11.20%	11.20%	11.20%	11.20%	11.20%
Loan	280.50	262.13	252.43	233.95	214.90
Interest on loan	31.42	29.36	28.27	26.20	24.07
Interest on working Capital					
Interest rate	12.05%	12.05%	12.05%	12.05%	12.05%
Working capital	32.05	32.80	34.03	34.93	35.86
IWC	3.86	3.95	4.10	4.21	4.32
Total (RoE+Int on loan+IWC)	61.99	60.46	60.74	59.33	57.86

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	2019-20	2020-21	2021-22	2022-23	2023-24
1	2	3	4	5	6	7
1	Cost of Fuel	0.00	0.00	0.00	0.00	0.00
2	O & M expenses	3.71	3.90	4.11	4.33	4.56
3	Maintenance Spares	6.67	7.03	7.40	7.80	8.21
4	Recievables	21.67	21.87	22.51	22.80	23.09
	Total Working Capital	32.05	32.80	34.03	34.93	35.86

Annexure A-24**FORM 5****Abstract of admitted capital cost for the existing stations****Name of the company: TSGENCO****Capital cost as admitted by TSERC****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	Srisaillam 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

ANNEXURE-A25

Name of the Company TELANGANA STATE POWER GENERATION CORPORATION LIMITED
Name of the Power Station Working Capital LOANS

(Amount in lacs)

Particulars	Package1	Package2	Package3	Package4	Package5	Package6	Package7	Package8	Package9	Package10	Package11
1	2	3	4	5	6	7	8	9	10	11	12
	MTL			Sp.MTL	STL-I	STL-II	FLC	STL	MTL-II		
Source of Loan ¹	REC	PFC	Punjab& Sind Bank	REC	PFC	PFC	PFC	Andhra Bank	REC	REC	L&T
Currency ²	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	100000.00	25000.00	25000.00	50000.00	50000.00	60000.00	50000.00	30000.00
Amount of Gross Loan drawn upto 31.03.2019/COD ^{3,4,5,13,15}	100000.00	100000.00	8667.52	100000.00	25000.00	25000.00	50000.00	5000.00	0.00	0.00	30000.00
Interest Type ⁶	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating	Floating
Fixed Interest Rate, if applicable											
Base Rate, if Floating Interest ⁷	9.95%	9.95%	Base Rate-9.70%	10%	11%	11%	11%	9.60%	11%	11%	11.60%
Margin, if Floating Interest ⁸	No	No	No	No	No	No	No	No	No	No	No
Are there any Caps/Floor ⁹								Yes			Yes
If above is yes,specify caps/floor											1.00%
Moratorium Period ¹⁰	2years	3 years	6 months	2years	6 months	6 months		6 months	2years	1 year	2 years
Moratorium effective from	30.12.14	31.12.14	20.11.2009	27.02.2017	21.01.2019	21.01.2019	21.01.2019	30.03.2019	30.09.2019	30.12.2019	27.06.13
Repayment Period ¹¹	3 years	7 years	10 years	3 years	6 months	6 months		30 months	3 years	4 years	8 Years
Repayment effective from	31.01.17	15.01.18	29.06.10	28.03.2019	16.08.2019	16.08.2019		31.10.2019	31.10.2021	31.01.2021	30.06.15
Repayment Frequency ¹²	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	bullet payment	Monthly	Monthly	Monthly	Monthly
Repayment Instalment ^{13,14}	36	84	120	36	6	6		30	36	48	96
Base Exchange Rate ¹⁶	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

PART-I

ANNEXURE -A26
Calculation of Weighted Average Rate of Interest on Actual Loans¹
FORM- 13

Name of the Company TELANGANA STATE POWER GENERATION CORPORATION LIMITED

Name of the Power Station Working capital Loans

(Amount in lakhs)

Sl. no.	Particulars	As on 31.03.19	2019-20	2020-21	2021-22	2022-23	2023-24
	2	3	4	5	6	7	8
1	Loan-1(REC)	100000.00					
	Gross loan - Opening	25000	100000.00				
	Cumulative repayments of Loans upto previous year		75000.00				
	Net loan - Opening		25000.00				
	Add: Drawal(s) during the Year		0				
	Less: Repayment (s) of Loans during the year		25000.00				
	Net loan - Closing		0.00				
	Average Net Loan		0.00				
	Rate of Interest on Loan		0				
	Interest on loan		9.95%				
2	Loan-2 PFC	100000.00					
	Gross loan - Opening	83929.00	100000.00	100000.00	100000.00	100000.00	100000.00
	Cumulative repayments of Loans upto previous year		16071.00	30357.00	44643.00	58929.00	73215.00
	Net loan - Opening		83929.00	69643.00	55357.00	41071.00	26785.00
	Add: Drawal(s) during the Year		0.00	0.00	0	0	0
	Less: Repayment (s) of Loans during the year		14286.00	14286.00	14286.00	14286.00	14286.00
	Net loan - Closing		69643.00	55357.00	41071.00	26785.00	12499.00
	Average Net Loan		69643.00	55357.00	41071.00	26785.00	12499.00
	Rate of Interest on Loan		9.95%				
	Interest on loan		7917.00	6440.00	4983.00	3526.00	2072.00
3	Loan-3 (Punjab & Sind Bank)	22000.00					
	Gross loan - Opening	796.00	8668.00				
	Cumulative repayments of Loans upto previous year		7872.00				
	Net loan - Opening		796.00				
	Add: Drawal(s) during the Year		0				
	Less: Repayment (s) of Loans during the year		796.00				
	Net loan - Closing		0.00				
	Average Net Loan		0.00				
	Rate of Interest on Loan		9.70%				
	Interest on loan		38				

4	Loan-4(REC)	100000.00					
	Gross loan - Opening	98125.00	100000.00	100000.00	100000.00	100000.00	100000.00
	Cumulative repayments of Loans upto previous year		1875.00	24375.00	61500.00		
	Net loan - Opening		98125.00	75625.00	38500.00		
	Add: Drawal(s) during the Year		0	0	0		
	Less: Repayment (s) of Loans during the year		22500.00	37125.00	38500.00		
	Net loan - Closing		75625.00	38500.00	0.00		
	Average Net Loan		75625.00	38500.00	0.00		
	Rate of Interest on Loan		10.00%				
	Interest on loan		8767.00	6044.00	1925.00		
5	Loan-5 PFC	25000.00					
	Gross loan - Opening	25000.00	25000.00				
	Cumulative repayments of Loans upto previous year		0.00				
	Net loan - Opening		25000.00				
	Add: Drawal(s) during the Year		0.00				
	Less: Repayment (s) of Loans during the year		25000.00				
	Net loan - Closing		0.00				
	Average Net Loan		0.00				
	Rate of Interest on Loan		11.00%				
	Interest on loan		1575.00				
6	Loan-6 PFC	25000.00					
	Gross loan - Opening	25000.00	25000.00				
	Cumulative repayments of Loans upto previous year		0.00				
	Net loan - Opening		25000.00				
	Add: Drawal(s) during the Year		0.00				
	Less: Repayment (s) of Loans during the year		25000.00				
	Net loan - Closing		0.00				
	Average Net Loan		0.00				
	Rate of Interest on Loan		11.00%				
	Interest on loan		1602.00				
7	Loan-7 PFC	50000.00					
	Gross loan - Opening	50000.00	50000.00				
	Cumulative repayments of Loans upto previous year		0.00				
	Net loan - Opening		50000.00				
	Add: Drawal(s) during the Year		0.00				
	Less: Repayment (s) of Loans during the year		50000.00				
	Net loan - Closing		0.00				
	Average Net Loan		0.00				
	Rate of Interest on Loan		11.00%				
	Interest on loan		2139.00				

8	Loan-8 Andhra Bank	50000.00					
	Gross loan - Opening	5000.00	5000.00	50000.00	50000.00		
	Cumulative repayments of Loans upto previous year		0.00	10000.00	30000.00		
	Net loan - Opening		5000.00	40000.00	20000.00		
	Add: Drawal(s) during the Year		45000.00	0.00	0		
	Less: Repayment (s) of Loans during the year		10000.00	20000.00	20000.00		
	Net loan - Closing		40000.00	20000.00	0.00		
	Average Net Loan		40000.00	20000.00	0.00		
	Rate of Interest on Loan		9.70%				
	Interest on loan		3374.00	3577.00	1257.00		
9	Loan-9(REC)	60000.00					
	Gross loan - Opening	0.00	0.00	60000.00	60000.00	60000.00	60000.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	0.00	10000.00	30000.00
	Net loan - Opening		0.00	60000.00	60000.00	50000.00	30000.00
	Add: Drawal(s) during the Year		60000.00	0.00	0.00	0	0
	Less: Repayment (s) of Loans during the year		0.00	0.00	10000.00	20000.00	20000.00
	Net loan - Closing		60000.00	60000.00	50000.00	30000.00	10000.00
	Average Net Loan		60000.00	60000.00	50000.00	30000.00	10000.00
	Rate of Interest on Loan		11.00%				
	Interest on loan		3108.00	6000.00	5791.00	4083.00	2083.00
10	Loan-9(REC)	50000.00					
	Gross loan - Opening	0.00	0.00	50000.00	50000.00	50000.00	50000.00
	Cumulative repayments of Loans upto previous year		0.00	0.00	3125.00	15625.00	28125.00
	Net loan - Opening		0.00	50000.00	46875.00	34375.00	21875.00
	Add: Drawal(s) during the Year		50000.00	0.00	0.00	0	0
	Less: Repayment (s) of Loans during the year		0.00	3125.00	12500.00	12500.00	12500.00
	Net loan - Closing		50000.00	46875.00	34375.00	21875.00	9375.00
	Average Net Loan		50000.00	46875.00	34375.00	21875.00	9375.00
	Rate of Interest on Loan		11.00%				
	Interest on loan		1375.00	5471.00	4526.00	3151.00	1776.00
11	Loan-5 (L&T Infarstructure Pvt. Ltd)	30000.00					
	Gross loan - Opening	15625.00	30000.00	30000.00	30000.00	30000.00	30000.00
	Cumulative repayments of Loans upto previous year		14375.00	18125.00	21875.00	25625.00	29375.00
	Net loan - Opening		15625.00	11875.00	8125.00	4375.00	625.00
	Add: Drawal(s) during the Year		0.00	0.00	0.00	0.00	0.00
	Less: Repayment (s) of Loans during the year		3750.00	3750.00	3750.00	3750.00	625.00
	Net loan - Closing		11875.00	8125.00	4375.00	625.00	0.00
	Average Net Loan		11875.00	8125.00	4375.00	625.00	0.00
	Rate of Interest on Loan		11.60%				
	Interest on loan		1613.00	1178.00	743.00	308.00	9.00