

BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION

GANDHINAGAR



CASE NO. _____

Filing of Petition for True Up of FY 2018-19

&

Tariff for FY 2020-21

Under

GERC MYT Regulations 2016 and

Section 62 of the Electricity Act, 2003.

Filed by:-

Gujarat State Electricity Corporation Limited

Regd. Office: Vidyut Bhavan, Race Course Circle, Vadodara – 390 007



**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**

Filing No:

Case No:

IN THE MATTER OF	Filing of Petition for True Up of FY 2018-19 and Determination of Tariff for FY 2020-21 under GERC MYT Regulations, 2016 and Section 62 of the Electricity Act, 2003.
AND	
IN THE MATTER OF	Gujarat State Electricity Corporation Limited, Vidyut Bhavan, Race Course, Vadodara 390007 Phone No. :0265 6612003; Fax: 0265 2344537 E-mail: gmf.gsecl@gebmail.com PETITIONER
AND	
IN THE MATTER OF	Gujarat Urja Vikas Nigam Limited, Sardar Patel Vidyut Bhavan, Race Course, Vadodara 390007 Phone No. 0265 6613221; Fax: 0265 2337918; E-mail: coacom@gebmail.com RESPONDENT

THE PETITIONER ABOVE NAMED RESPECTFULLY SUBMITS



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ABBREVIATIONS

1.	AOH	Annual Over Hauling
2.	ARR	Aggregate Revenue Requirement
3.	CEA	Central Electricity Authority
4.	FY	Financial Year
5.	GEB	Gujarat Electricity Board
6.	GERC	Gujarat Electricity Regulatory Commission
7.	GoG	Government of Gujarat
8.	GSECL	Gujarat State Electricity Corporation Limited
9.	GUVNL	Gujarat Urja Vikas Nigam Limited
10.	KV	Kilo Volt
11.	KWh	Kilo Watt Hour
12.	MW	Mega Watt
13.	MYT	Multi Year Tariff
14.	O&M	Operation & Maintenance
15.	PAF	Plant Availability Factor
16.	PLF	Plant Load Factor
17.	R&M	Renovation & Modernization
18.	SHR	Station Heat Rate
19.	Second Control Period	FY 2011-12, FY 2012-13, FY 2013-14, FY 2014-15, FY 2015-16
20.	Third Control Period	FY 2016-17, FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21



SECTION 1. INTRODUCTION

1.1. PREAMBLE

1.1.1. This section presents the background and reasons for filing of this Petition.

1.2. INTRODUCTION

1.2.1. The Government of Gujarat (hereinafter referred to as "GoG") notified the Gujarat Electricity Industry (Reorganization and Regulation) Act 2003 (hereinafter called as "Act") in May 2003 for the reorganization of the entire power sector in the State of Gujarat.

1.2.2. Pursuant to the above, Gujarat Electricity Board (the Board) has been unbundled into functional entities with effect from 1st April, 2005 with assets of the GEB disaggregated into seven companies, and all power stations of erstwhile GEB transferred to GSECL.

1.2.3. Gujarat State Electricity Corporation Limited (GSECL) was registered in 1993 under the Companies Act 1956 for the generation of Electricity.

1.2.4. The Gujarat Electricity Regulatory Commission (hereinafter referred to as "GERC" or "the Commission"), an independent statutory body constituted under the provisions of the Electricity Regulatory Commissions (ERC) Act, 1998 and is currently under purview of the Electricity Act, 2003. GERC is vested with the authority of regulating the power sector in the State inter alia including determination of Tariff for electricity consumers.

1.2.5. Hon'ble Commission notified the Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2016 ("GERC MYT Regulations, 2016") on 29th March 2016 and shall be applicable for determination of tariff in all cases covered under the regulations from 1st April, 2016 onwards. Based on these Regulations, the Commission issued the Multi-Year Tariff Order dated 31 March, 2017 in Petition No. 1619 of 2016 wherein Truing up of ARR for FY 2015-16 and determination of final ARR of FY 2016-17 and approval of Multi-Year ARR for the Third Control Period FY 2016-17 to FY 2020-21 was carried out.

1.2.6. Subsequently, the Commission issued the Order in Petition No.1693 of 2017 on 31 March, 2018 wherein Truing up of ARR of FY 2016-17 was carried out. The Hon'ble Commission then issued the Order in Petition No. 1756 of 2018 on 24 April, 2019 wherein Truing up of ARR of FY 2017-18 and Tariff Determination for FY 2019-20 was carried out.



1.3. MULTI-YEAR TARIFF FRAMEWORK REGULATIONS:

1.3.1. The key provisions of the Multi-Year Tariff Regulations, 2016 are reproduced below:

1.3.2. Section 3.1 of the GERC MYT Regulations, 2016:

3.1: The Commission shall determine tariff within the Multi-Year Tariff framework, for all matters for which the Commission has jurisdiction under the Act, including in the following cases:

- i. Supply of electricity by a Generating Company to a Distribution Licensee
- ii. Intra-State transmission of electricity;
- iii. SLDC Fees and Charges;
- iv. Intra-State Wheeling of electricity;
- v. Retail supply of electricity

1.3.3. Section 17 of the GERC MYT Regulations, 2016:

“17.2 The filing for the Control Period under these Regulations shall be as under:

c) In case of Mid-term Review of Aggregate Revenue Requirement under Regulation 16.2 (i), the Petition shall comprise of:

- i. Truing Up for the previous year under these Regulations;*
- ii. Modification of the Aggregate Revenue Requirement for the remaining years of the Control Period, if any, with adequate justification for the same;*
- iii. Revenue from the sale of power at existing tariffs and charges for the ensuing year;*
- iv. Revenue gap or revenue surplus for the ensuing year calculated based on Aggregate Revenue Requirement approved in the MYT Order and truing up for the previous year;*
- vi. Application for determination of tariff for the ensuing year.”*

1.3.4. Under section 62 of the Electricity Act, 2003 and GERC MYT Regulations, 2016, GSECL is filing its Petition for True Up for FY 2018-19 and determination of revised Tariff for FY 2020-21 to the Hon'ble Commission for approval.



SECTION 2. EXECUTIVE SUMMARY

2.1. PREAMBLE

2.1.1. This section highlights the summary of Petition for True Up for FY 2018-19 and Determination of Tariff for FY 2020-21.

2.2. TRUE UP OF FY 2018-19

2.2.1. GSECL has worked out its Aggregate Revenue Requirement (ARR) for FY 2018-19 as a part of the True Up for FY 2018-19. GSECL has presented the actual cost components based on audited annual accounts for FY 2018-19.

2.2.2. Tables below summarize the results of True up of FY 2018-19 of GSECL Stations. For the purpose of True Up, GSECL compared the actual cost for FY 2018-19 with the cost approved by the Hon'ble Commission in "*Multi-Year Tariff Order dated 31st March, 2017*".

2.2.3. The actual fixed cost of GSECL based on audited accounts is as shown in below table.



Table 1 : Fixed Cost for GSECL for FY 2018-19

Rs. Crore												
Sr. No.	Power Station	Depreciation (Actual)	Interest & Finance Charges (Actual)	Return on Equity (Actual)	Interest on Working Capital (Actual)	O&M Expenses (Actual)	Water Charges (Actual)	SLDC Charges (Actual)	Tax (Actual)	Total Fixed Cost (Actual)	Non-Tariff Income (Actual)	Net Fixed Charges
1	Ukai (3-5)	40.88	-	20.96	39.10	214.10	-	0.11	2.68	317.84	26.39	291.45
2	Gandhinagar (3-4)	30.12	-	21.95	29.51	135.24	44.88	0.11	1.85	263.66	25.99	237.67
3	Gandhinagr 5*	-	-	28.67	14.23	33.15	29.55	-	0.92	106.53	13.59	92.93
4	Wanakbori 1-6 TPS	83.94	23.83	83.52	87.76	235.58	56.57	0.22	5.54	576.96	40.42	536.55
5	Wanakbori 7*	-	-	26.16	13.97	19.37	11.26	0.04	0.92	71.71	7.59	64.13
6	Sikka Extension (3-4)*	179.03	148.76	139.57	42.09	115.50	4.60	0.09	2.20	631.85	4.89	626.96
7	KLTPS 1-3	32.20	1.76	51.10	10.30	132.26	0.27	0.04	0.94	228.88	3.44	225.43
8	KLTPS 4	35.88	13.08	29.18	3.92	15.45	0.10	0.01	0.33	97.95	-	97.95
9	Dhuvaran CCPP 1*	9.70	-	10.45	4.93	35.10	0.00	0.02	0.47	60.67	0.62	60.05
10	Dhuvaran CCPP 2	22.26	5.02	14.19	5.88	35.10	-	0.02	0.49	82.95	0.62	82.33
11	Dhuvaran CCPP 3*	78.77	71.16	67.01	34.78	2.26	-	0.07	1.65	255.70	0.19	255.51
12	Utran Extension*	68.21	37.26	57.43	37.54	41.21	2.20	0.07	1.65	245.56	0.96	244.60
13	Ukai 6*	153.96	105.95	124.33	35.96	47.70	-	0.10	2.20	470.19	5.02	465.18
14	Ukai Hydro	2.24	2.15	10.56	0.67	10.60	-	0.05	1.34	27.62	0.01	27.61
15	Kadana Hydro	5.34	-	28.67	1.20	23.03	-	0.04	1.06	59.35	0.47	58.87
Total		742.52	408.97	713.77	361.86	1,095.65	149.42	0.99	24.24	3,497.42	130.20	3,367.22

* PPA based Stations



2.2.4. Based on actual operating & fuel related parameters during FY 2018-19, table below indicates actual audited energy charges for GSECL's stations for FY 2018-19 along with the approved ones:

Table 2 : Energy Charges for GSECL's Plants for FY 2018-19

Sr. No.	Power Station	Approved (Rs/kWh)	Actual (Rs/kWh)
1	Ukai (3-5)	3.80	3.67
2	Gandhinagar (3-4)	4.04	3.95
3	Gandhinagr 5*	3.92	3.91
4	Wanakbori 1-6 TPS	4.04	3.90
5	Wanakbori 7*	3.87	3.75
6	Sikka Extension (3-4)*	4.16	4.45
7	KLTPS 1-3	2.46	3.15
8	KLTPS 4	2.50	2.79
9	Dhuvaran CCPP 1*	2.61	2.90
10	Dhuvaran CCPP 2	3.00	3.44
11	Dhuvaran CCPP 3*	6.11	6.31
12	Utran Extension*	6.83	6.63
13	Ukai 6*	3.41	3.30

* PPA Governed Station

2.2.5. The detailed comparison of various cost components with the values approved by the Hon'ble Commission vide "Multi-Year Tariff Order dated 31st March, 2017" for True up has been worked out in Section 4 of the Petition. Table below summarizes plant wise gains/ losses incurred by GSECL on account of controllable/ uncontrollable factors, which needs to be shared with the Consumers as per the mechanism prescribed by the Hon'ble Commission in the MYT Regulations.

Table 3 : Gains / (Losses) on account of Controllable Factors for FY 2018-19

Sr. No.	Power Station	Rs. Crores			
		Gain/(Loss) due to Controllable Factors O&M Expenses	Fuel Cost	Total Gains/ (Losses) due to Controllable factors	Total Gains/ (Losses) to be passed through (1/3rd of gains/ losses)
1	Ukai (3-5)	(37.67)	45.19	7.53	2.51
2	Gandhinagar (3-4)	(29.78)	17.01	(12.77)	(4.26)
3	Gandhinagr 5*	-	-	-	-
4	Wanakbori 1-6 TPS	24.74	87.56	112.30	37.43
5	Wanakbori 7*	-	-	-	-
6	Sikka Extension (3-4)*	-	-	-	-
7	KLTPS 1-3	(12.33)	(51.66)	(63.99)	(21.33)
8	KLTPS 4	6.01	(7.19)	(1.18)	(0.39)
9	Dhuvaran CCPP 1*	-	-	-	-
10	Dhuvaran CCPP 2	1.48	(11.40)	(9.92)	(3.31)
11	Dhuvaran CCPP 3*	-	-	-	-
12	Utran Extension*	-	-	-	-
13	Ukai 6*	-	-	-	-
14	Ukai Hydro	11.23	-	11.23	3.74
15	Kadana Hydro	3.77	-	3.77	1.26
Total		(32.53)	79.51	46.98	15.66

*PPA Governed Station



Table 4 : Gains/ (Losses) on account of uncontrollable Factors for FY 2018-19

Sr. No.	Power Station	Gain/(Loss) due to Uncontrollable Factors									Rs. Crores	
		O&M	Depreciation	Interest & Finance Charges	ROE	Interest on Working Capital	Water Charges	SLDC Charges	Tax	Non-Tariff Income	Total Gains/ (Losses) due to Uncontrollable factors	Total Gains/ (Losses) to be passed through
1	Ukai (3-5)	(11.73)	22.13	28.08	(2.64)	(9.07)	0.10	0.49	0.79	10.52	39.67	38.67
2	Gandhinagar (3-4)	(13.85)	25.86	6.67	(4.51)	(7.15)	(37.87)	0.39	0.54	13.49	(16.44)	(16.43)
3	Gandhinagr 5*	(6.92)	-	-	-	-	-	-	0.27	-	(6.66)	(6.66)
4	Wanakbori 1-6 TPS	(20.62)	27.94	(2.91)	(0.76)	(20.90)	(20.81)	0.59	1.63	(5.87)	(41.71)	(41.71)
5	Wanakbori 7*	(3.44)	-	-	-	-	-	-	0.27	-	(3.17)	(3.17)
6	Sikka Extension (3-4)*	(8.74)	-	-	-	-	-	-	0.64	-	(8.09)	(8.09)
7	KLTPS 1-3	(5.13)	33.98	(1.75)	(2.34)	(1.65)	0.16	0.13	0.28	(1.40)	22.28	22.28
8	KLTPS 4	(1.79)	0.30	2.77	0.14	(0.56)	0.03	0.01	0.10	(1.65)	(0.65)	(0.65)
9	Dhuvaran CCPP 1*	(3.04)	-	-	-	-	-	-	0.14	-	(2.90)	(2.90)
10	Dhuvaran CCPP 2	(3.04)	(0.31)	3.44	1.68	(0.07)	0.76	0.03	0.15	(1.19)	1.45	1.45
11	Dhuvaran CCPP 3*	-	-	-	-	-	-	-	0.49	-	0.49	0.49
12	Utran Extension*	(4.05)	-	-	-	-	-	-	0.48	-	(3.57)	(3.57)
13	Ukai 6*	(9.61)	-	-	-	-	-	-	0.64	-	(8.97)	(8.97)
14	Ukai Hydro	(1.63)	(2.24)	0.40	(0.14)	0.05	-	0.12	0.39	(3.50)	(6.56)	(6.56)
15	Kadana Hydro	(2.46)	10.39	-	0.02	0.09	-	0.11	0.32	(2.59)	5.87	5.87
Total		(96.04)	118.06	36.71	(8.56)	(39.27)	(57.62)	1.86	7.13	7.81	(29.94)	(29.94)

* PPA governed Station



2.2.6. Based on the above estimated gains / (losses) on account of controllable and uncontrollable factors, the Gap/ Surplus of GSECL for FY 2018-19 has been worked out as given below:

Table 5 : Net entitlement for FY 2018-19

Rs. Crores				
Sr. No.	Power Station	Gain/(Losses) due to controllable factor	Gain/(Losses) due to uncontrollable factor	Total Gain/(losses) to be passed through
a	b	c	d	e = c/3 + d
1	Ukai (3-5)	7.53	38.67	41.18
2	Gandhinagar (3-4)	(12.77)	(16.43)	(20.69)
3	Gandhinagr 5*	-	(6.66)	(6.66)
4	Wanakbori 1-6 TPS	112.30	(41.71)	(4.28)
5	Wanakbori 7*	-	(3.17)	(3.17)
6	Sikka Extension (3-4)*	-	(8.09)	(8.09)
7	KLTPS 1-3	(63.99)	22.28	0.95
8	KLTPS 4	(1.18)	(0.65)	(1.04)
9	Dhuvaran CCPP 1*	-	(2.90)	(2.90)
10	Dhuvaran CCPP 2	(9.92)	1.45	(1.85)
11	Dhuvaran CCPP 3*	-	0.49	0.49
12	Utran Extension*	-	(3.57)	(3.57)
13	Ukai 6*	-	(8.97)	(8.97)
14	Ukai Hydro	11.23	(6.56)	(2.81)
15	Kadana Hydro	3.77	5.87	7.13
Total		46.98	(29.94)	(14.28)

* PPA governed Station

2.3. UNABSORBED DEPRECIATION FOR SIKKA TPS UNITS 1 AND 2

2.3.1. GSECL submits that its generating station Sikka Units 1 and 2 have completed its useful life and has been decommissioned on 1 April, 2017. Accordingly, there was a depreciation amounting to Rs. 170.12 Crore that has not been claimed/charged by GSECL and the same was not approved by Hon'ble Commission in the Tariff. The detailed working of the same has been elaborated in subsequent chapters. GSECL hereby request the Hon'ble Commission to approve the aforesaid unabsorbed depreciation in FY 2020-21.

2.4. TARIFF DETERMINATION OF BLTPS UNITS 1 AND 2

2.4.1. Bhavnagar Energy Company Ltd. (BECL) Vide the GoG notification dated 27 August, 2018 is merged with GSECL. Accordingly, the assets and liabilities are transferred to GSECL. The effective date of transfer is 1 April, 2018 as per the notification. GSECL requests the Hon'ble Commission to determine the Tariff for Bhavnagar Lignite Thermal Power Station (erstwhile BECL) Units 1 and 2 for FY 2020-21. The detailed working of the same has been elaborated in subsequent chapters.



2.5. TARIFF FOR FY 2020-21

- 2.5.1. Based on the Truing up, GSECL has projected the Fixed cost for FY 2020-21 on the basis of GERC MYT Regulations, 2016. The basis of such projections has been dealt in detail in subsequent sections of the petition. GSECL has considered the Variable Charge for FY 2020-21 based on Approved Variable Charges for FY 2020-21 in the MYT Order dated 31st March, 2017.
- 2.5.2. The Fixed and Variable cost of GSECL's Generating Plants for FY 2020-21 are estimated as under:



Table 6 : Approved Fixed Cost of GSECL plants for FY 2020-21

Sr. No.	Power Station	Depreciation	Interest & Finance Charges	Return on Equity	Interest on Working Capital	O&M Expenses	Water Charges	Tax	SLDC Fees & Charges	Total Fixed Cost	Rs. Crores	
											Less: Non-Tariff Income	Net Fixed Charges
1	Ukai (3-5)	80.83	36.94	32.86	30.30	184.09	0.10	3.47	0.60	369.19	11.39	357.81
2	Gandhinagar (3-4)	56.27	0.08	17.67	22.52	102.39	7.01	2.39	0.50	208.83	12.50	196.33
3	Gandhinagr 5*	-	-	30.88	14.70	26.09	11.87	1.19	0.05	84.78	11.93	72.86
4	Wanakbori 1-6 TPS	127.36	18.12	95.65	66.99	267.91	35.76	7.17	0.81	619.77	46.29	573.49
5	Wanakbori 7*	-	-	28.03	11.49	21.65	8.18	1.19	0.05	70.59	6.75	63.85
6	Sikka Extension (3-4)	172.90	144.66	137.53	29.20	112.90	1.19	2.84	0.23	601.45	9.60	591.84
7	KLTPS 1-3	66.80	0.01	49.27	8.94	128.32	0.43	1.22	0.17	255.16	4.84	250.32
8	KLTPS 4	36.44	9.13	29.53	3.35	21.98	0.13	0.43	0.02	101.01	1.65	99.38
9	Dhuvaran CCPP 1*	21.24	-	11.07	5.27	37.39	0.21	0.61	0.05	75.84	1.74	74.10
10	Dhuvaran CCPP 2	24.92	8.11	18.49	6.00	37.48	0.76	0.64	0.05	96.45	1.81	94.65
11	Dhuvaran CCPP 3*	76.43	64.37	65.36	13.11	77.85	-	2.14	0.17	299.43	4.32	295.11
12	Utran Extension*	66.54	31.25	57.60	19.18	62.03	3.64	2.13	0.14	242.51	5.69	236.81
13	Ukai 6*	141.13	98.59	122.46	29.88	112.90	0.10	2.84	0.34	508.24	12.71	495.54
14	Ukai Hydro	-	2.53	10.42	0.76	22.59	-	1.73	0.17	38.20	3.51	34.69
15	Kadana Hydro	15.90	-	28.84	1.35	27.20	-	1.38	0.15	74.82	3.06	71.76
16	Wanakbori 8 TPS*	235.75	252.40	187.53	55.51	153.54	-	-	-	884.73	-	884.72
Total		1,122.50	666.20	923.20	318.54	1,396.32	69.39	31.37	3.50	4,531.02	137.78	4,393.24

*PPA based stations

Note: GSECL has excluded Dhuvaran STPS* from above MYT approved Table as the Govt. of Gujarat has decided not to have any new thermal power plants to encourage clean environment and clean energy in the State.



Table 7 : Proposed revised Fixed Cost of GSECL plants for FY 2020-21

				Rs. Crores
Sr. No.	Power Station	Fixed Charges for FY 2020-21	Total Gain/(losses) to be passed through	Net Fixed Charges for FY 2020-21
1	Ukai (3-5)	357.81	41.18	316.63
2	Gandhinagar (3-4)	196.33	(20.69)	217.02
3	Gandhinagr 5*	72.86	(6.66)	79.52
4	Wanakbori 1-6 TPS	573.49	(4.28)	577.77
5	Wanakbori 7*	63.85	(3.17)	67.02
6	KLTPS 1-3	250.32	0.95	249.37
7	KLTPS 4	99.38	(1.04)	100.42
8	Dhuvaran CCPP 1*	74.10	(2.90)	77.00
9	Dhuvaran CCPP 2	94.65	(1.85)	96.50
10	Utran Extension*	236.81	(3.57)	240.38
11	Ukai Hydro	34.69	(2.81)	37.50
12	Kadana Hydro	71.76	7.13	64.63
13	Ukai 6*	495.54	(8.97)	504.51
14	Dhuvaran CCPP 3*	295.11	0.49	294.62
15	Sikka 3&4*	591.84	(8.09)	599.93
16	Wanakbori 8 TPS*	884.72	-	884.72
Total		4,393.24	(14.28)	4,407.54

*PPA based stations

Table 8 : Approved Energy Charges of GSECL plants for FY 2020-21

Sr. No.	Power Station	2020-21 (Rs/kWh)
1	Ukai (3-5)	2.768
2	Gandhinagar (3-4)	3.308
3	Gandhinagr 5*	3.912
4	Wanakbori 1-6 TPS	3.238
5	Wanakbori 7*	3.093
6	Sikka Extension (3-4)*	2.425
7	KLTPS 1-3	1.496
8	KLTPS 4	1.469
9	Dhuvaran CCPP 1*	3.899
10	Dhuvaran CCPP 2	4.066
11	Dhuvaran CCPP 3*	2.256
12	Utran Extension*	4.345
13	Ukai 6*	2.516
14	Wanakbori 8*	2.941

2.5.3. GSECL requests Hon'ble Commission to approve Fixed Costs for FY 2020-21 as mentioned above.



SECTION 3. GSECL'S PERFORMANCE & FUEL RELATED PARAMETERS

3.1. PREAMBLE

- 3.1.1. This section outlines the performance & fuel related parameters for GSECL Power plants. For the above purpose, GSECL is indicating actual performance and fuel related parameters achieved in FY 2018-19 vis-à-vis parameters approved in "Multi-Year Tariff Order dated 31st March, 2017". In this section, GSECL has also provided reasons for deviation in the parameters from the approved figures, if any.
- 3.1.2. The parameters for the PPA governed stations are only indicative, and it may be noted that the parameters for these stations will be governed by terms & conditions of the Power Purchase Agreements.
- 3.1.3. The following table gives the details of the generating stations along with their capacity and the date of Commissioning:

Table 9 : Capacity, COD & Age of GSECL's generating stations

Name of Station	Unit No.	Capacity of the Unit (MW)	Date of Commissioning
Ukai	3	200	21/01/1979
	4	200	11/09/1979
	5	210	30/01/1985
	Sub Total	610	
Gandhinagar	3	210	20/03/1990
	4	210	20/07/1991
	5	210	17/03/1998
	Sub Total	630	
Wanakbori	1	210	23/03/1982
	2	210	15/01/1983
	3	210	15/03/1984
	4	210	09/03/1986
	5	210	23/09/1986
	6	210	18/11/1987
	7	210	31/12/1998
Sub Total	1470		
KLTPS	1	70	29/03/1990
	2	70	25/03/1991
	3	75	31/03/1997
	4	75	20/12/2009
Sub Total	290		
Dhuvaran	7 - Gas	106.617	28/01/2004
	8 - Gas	112.45	01/11/2007
	Sub Total	219.067	
Utran Extension	GT -1	375	08-11-2009
Sikka TPS 3&4	3	250	14/09/2015
	4	250	28/12/2015
	Sub Total	500	
Ukai TPS	6	500	08/06/2013



Name of Station	Unit No.	Capacity of the Unit (MW)	Date of Commissioning
Dhuvaran (Gas)	3	376	21/05/2014
BLTPS	1	250	16/05/2016
	2	250	27/03/2017
	Sub Total	500	
SUB TOTAL GSECL (Coal + Lignite)		4500	
SUB TOTAL GSECL (Gas)		969.74	
TOTAL GSECL (Thermal)		5469.74	
Ukai Hydro	1	75	08/07/1974
	2	75	13/12/1974
	3	75	22/4/1975
	4	75	04/03/1976
	Sub Total	300	
Ukai LBC	1	2.5	08/12/1987
	2	2.5	19/02/1988
	Sub Total	5	
Kadana Hydro	1	60	31/03/1990
	2	60	02/09/1990
	3	60	03/01/1998
	4	60	27/05/1998
	Sub Total	240	
Panam	1	1	24/03/1994
	2	1	31/03/1994
	Sub Total	2	
SUB TOTAL GSECL (Hydro)		547.00	
Wind Mills		10.00	04/01/2009
Solar	Plant at GTPS Yard	1	27/03/2012
	Plant at Sanand Br. Canal	1	29/03/2012
	Charanka	10	23/03/2015
	KLTPS	1	02/05/2016
	Sikka TPS	1	02/05/2016
	Dhuvaran	75	05/02/2019
	TOTAL GSECL as a Whole		6115.74



3.2. OPERATING PARAMETERS FOR GSECL

3.2.1. Power generating stations are broadly governed by the following operational parameters:

1. Station heat rate
2. Plant Availability factor
3. Plant load factor
4. Specific fuel oil consumption
5. Auxiliary consumption

3.2.2. The above operating parameters are dependent on various technical factors like design, level of operation (low/partial load operation), ageing, water chemistry, number of start/stop etc. The justification for the operational parameters has been discussed in detail in the subsequent sections.

3.2.3. **Ageing:** Most of the existing plants of GSECL are small in size (210MW) and are very old. The degradation of machines due to ageing affects the heat transfer capacity and thus increase the SHR. Further, due to many other reasons like high bearing vibrations/temperature, condenser vacuum, eccentricity, etc. cause failure of the respective auxiliary and cause deterioration in the actual performance of the plants. There were also frequent boiler tube failures due to erosion of tubes which may be caused due to poor quality of fuels or other operational constraints. Due to this the efficiency of Boiler as well as Turbine falls with the increase in number of start/stop operation. The older machines are generally affected more due to above reasons as compared to newer machines. Hence, it becomes very difficult to achieve the target performance parameters as specified in the Tariff Orders

3.2.4. **Low PLF:** There has been a significant amount of backing down in the recent past years. In Gujarat, the Intra State ABT / Merit order Despatch System is followed. Gujarat, being a power surplus State, the despatch instructions for a generating station depend upon the merit order (Low cost generation are given priority) as per the Indian Electricity Grid Code. Accordingly, the GSECL stations are advised to be backed down or put under Reserve Shut Down depending upon system conditions. This results in lower plant load factor (PLF) of GSECL stations which is beyond the control of GSECL.

3.2.5. **Effects of low load operation/back down:** Partial load / low load operation results in deterioration in overall performance of the units and lower efficiency of power stations. Following performance issues can be attributed to the low load operation of generating stations;

- Increase in station heat rate (SHR)
- Increase in fuel consumption
- Increase in auxiliary consumption
- Increase in repair and maintenance expenses



- Increase in specific fuel oil consumption (Increase in no. of hot/cold startups increases the fuel oil consumption)

3.2.6. These factors are beyond the control of GSECL and it requests the Hon'ble Commission to approve the actual performance related factors of GSECL Stations. Despite these uncontrollable issues, most of the GSECL power stations have performed up to the benchmark levels. (Individual details of plants and their reasons for under-performance are explained in subsequent sections.)

3.2.7. GSECL submits that all the above parameters are beyond the control of GSECL.

3.2.8. GSECL also submits that minor R&M projects are taken up to improve the automatic control systems and instrumentation of the old plants for replacing obsolete system to sustain performance.

3.2.9. Justification for the proposed operating parameters for true-up of FY 2018-19:

3.2.10. The actual operating parameters are dependent on the present condition of machine. The present operating condition of the machines is a function of several factors. The factors impacting GSECL stations have been specified in the Case no. 1619 of 2016 for "Filing of Petition for True Up of FY 2015-16 and Multi Year Aggregate Revenue Requirement for FY 2016-17 to 2020-21 and Determination of final ARR for FY 2016-17 and Determination of Tariff for FY 2017-18 for GSECL Stations under MYT Framework Regulations and Section 62 of the Electricity Act, 2003" & are still valid. Therefore, the Hon'ble Commission is requested to consider the same.

3.3. TARGET AVAILABILITY FOR RECOVERY OF FULL CAPACITY (FIXED) CHARGES

3.3.1. The plant availability factor achieved by the GSECL stations during FY 2018-19 for recovery of fixed charges is shown as per the Table 10 below.

3.3.2. For true-up, the factors impacting availability of GSECL stations & reasons for deviation from norms are as below:

- **Ukai (6):** Generator Rotor Earth Fault & 400 KV Cable Fault of Unit 6 resulted in reduced availability.
- **KLPTS (1 -3):** Non availability of coal mills due to poor lignite quality impacted the availability of Plant.
- **KLTPS 4:** Boiler tube leakages, seal pot to combustor expansion joint leakage caused forced outages and partial outages.
- **Dhuvaran CAPP 1:** Turbine Bearing Vibration - replacement of both bearings of Gas Turbine.
- **Dhuvaran CAPP 2:** Forced outages due to Gas Turbine Start up problem (SFC) & loss of availability due to Vacuum.

**Table 10 : Plant availability factor**

(In %)

Sr. No.	Power Station	FY 2018-19	
		Approved	GSECL (Actual)
1	Ukai (3-5)	80%	82.69%
2	Gandhinagar (3-4)	84%	87.59%
3	Gandhinagar 5*	85%	89.94%
4	Wanakbori 1-6 TPS	85%	89.26%
5	Wanakbori 7*	85%	90.05%
6	Sikka Extension (3-4)*	85%	90.19%
7	KLTPS 1-3	75%	46.01%
8	KLTPS 4	80%	44.47%
9	Dhuvaran CCPP 1*	85%	35.91%
10	Dhuvaran CCPP 2	85%	76.37%
11	Dhuvaran CCPP 3*	85%	95.79%
12	Utran Extension*	85%	95.94%
13	Ukai 6*	85%	76.86%
14	Ukai Hydro	80%	97.92%
15	Kadana Hydro	80%	92.56%

**PPA Governed Station*

3.4. PLANT LOAD FACTOR

3.4.1. The actual Plant Load Factor achieved by the GSECL during FY 2018-19 is tabulated below.

3.4.2. For true-up, the factors impacting PLF of GSECL stations and reasons for deviation from norms are as below:

- **Ukai 6:** Generator Rotor Earth Fault & 400 KV Cable Fault.
- **Sikka (3-4):** Backing down and Reserve shut down as per SLDC instructions
- **KLTPS 1-3:** Non availability of coal mills due to change in source of coal affected plant load factor.
- **KLTPS 4:** Combustor inspection, Cyclone vortex and Seal pot issue caused forced/partial outages thus reduced plant load factor.
- **Dhuvaran CCPP1:** Turbine Bearing Vibration and Reserve shut of plant.
- **Dhuvaran CCPP3:** Reserve shut down
- **Utran Extension:** Reserve shut down

**Table 11 : Plant load factor**

(In %)

Sr. No.	Power Station	FY 2018-19	
		Approved	GSECL (Actual)
1	Ukai (3-5)	60%	73.20%
2	Gandhinagar (3-4)	45%	60.71%
3	Gandhinagar 5*	77%	79.93%
4	Wanakbori 1-6 TPS	52%	61.95%
5	Wanakbori 7*	70%	81.83%
6	Sikka Extension (3-4)*	70%	62.24%
7	KLTPS 1-3	75%	47.04%
8	KLTPS 4	75%	48.62%
9	Dhuvaran CCPP 1*	25%	14.89%
10	Dhuvaran CCPP 2	25%	28.65%
11	Dhuvaran CCPP 3*	25%	8.52%
12	Utran Extension*	25%	12.75%
13	Ukai 6*	77%	69.07%
14	Ukai Hydro	13%	8.29%
15	Kadana Hydro	6%	11.39%

* PPA Governed Station

3.5. AUXILIARY CONSUMPTION

3.5.1. The actual Auxiliary consumption recorded by GSECL during FY 2018-19 has been mentioned below. The old stations of GSECL, when operated at part load capacities under the constraints as shown, consume more auxiliary power resulting in higher auxiliary consumption.

3.5.2. For true-up, the factors impacting auxiliary consumption of GSECL stations & reasons for deviation from norms are as below:

- **Ukai 3-5:** Partial operation due to backing down & Auxiliary Power consumption during Reserve Shutdown
- **Gandhinagar 3-4:** Partial operation due to backing down & Auxiliary Power consumption during Reserve Shutdown
- **Gandhinagar 5:** Partial operation due to backing down & Auxiliary Power consumption during Reserve Shutdown
- **Wanakbori 1-6:** Partial operation due to backing down & Auxiliary Power consumption during Reserve Shutdown
- **Sikka 3-4:** Partial Operation due to backing down & Auxiliary Power consumption during Reserve Shutdown
- **KLTPS 1-3:** Partial Operation due to poor lignite quality & Unit constrains
KLTPS 4: Partial Operation due to unit constrains (Partial Operation)



- **Dhuvaran CCPP1:** Auxiliary Power consumption during Reserve Shutdown - & Force Shutdown
- **Dhuvaran CCPP2:** Auxiliary Power consumption during Reserve Shutdown
- **Dhuvaran CCPP3:** Auxiliary Power consumption during Reserve Shutdown
- **Utran Extension:** Auxiliary Power consumption during Reserve Shutdown
- **Ukai Hydro:** Low reservoir level due to Irrigation dependency

3.5.3. Over and above backing down, the units frequently undergo reserve shut down and during the same, minimum auxiliaries are required to be run to keep the units available so that the same can be taken as and when required by SLDC / system.

Table 12 : Auxiliary consumption

(In %)

Sr. No.	Power Station	FY 2018-19	
		Approved	GSECL (Actual)
1	Ukai (3-5)	9.00%	9.55%
2	Gandhinagar (3-4)	9.00%	10.56%
3	Gandhinagar 5*	9.50%	9.64%
4	Wanakbori 1-6 TPS	9.00%	9.11%
5	Wanakbori 7*	9.50%	9.17%
6	Sikka Extension (3-4)*	9.00%	9.49%
7	KLTPS 1-3	12.00%	15.47%
8	KLTPS 4	12.00%	22.74%
9	Dhuvaran CCPP 1*	4.00%	7.35%
10	Dhuvaran CCPP 2	3.00%	6.85%
11	Dhuvaran CCPP 3*	3.00%	6.04%
12	Utran Extension*	3.00%	4.24%
13	Ukai 6*	6.00%	6.05%
14	Ukai Hydro	0.60%	1.19%
15	Kadana Hydro	1.00%	0.76%

* PPA Governed Station

3.6. STATION HEAT RATE

3.6.1. Actual Station Heat Rate attained by the generating stations of GSECL during FY 2018-19 has been mentioned in the table below. It may be noted that for any generation plant, the SHR always deteriorates with the time. Hence, the old stations of GSECL are not expected to achieve the SHR comparable to the norms of the Hon'ble Commission. Further as and when any unit operates on partial load, SHR increases drastically. GSECL has taken measures to improve SHR due to which some stations have shown considerable improvement.

3.6.2. For true-up, the factors impacting SHR of GSECL stations & reasons for deviation from norms are as below:

- **Gandhinagar 5:** Partial load operation due to backing down



- **Sikka 3-4:** Partial Operation due to backing down & Frequent start stop due to Reserve Shutdown and Forced Outages.
- **KLTPS 1-3:** Partial Operation due to change in source of lignite and Outages
- **KLTPS 4:** Partial Operation due to unit constrains (Combustor and Seal pot leakage) & Forced Outages
- **Dhuvaran CCPP1:** Partial Operation due to backing down, Condenser problem & Frequent Start-Stop
- **Dhuvaran CCPP2:** Partial Operation due to backing down, Condenser problem & Frequent Start-Stop

Table 13 : Station heat rate

In Kcal/KWh

Sr. No.	Power Station	FY 2018-19	
		Approved	GSECL (Actual)
1	Ukai (3-5)	2,625	2,529
2	Gandhinagar (3-4)	2,625	2,537
3	Gandhinagar 5*	2,460	2,504
4	Wanakbori 1-6 TPS	2,625	2,539
5	Wanakbori 7*	2,460	2,454
6	Sikka Extension (3-4)*	2,398	2,552
7	KLTPS 1-3	3,231	3,320
8	KLTPS 4	3,000	3,015
9	Dhuvaran CCPP 1*	1,950	2,091
10	Dhuvaran CCPP 2	1,950	2,143
11	Dhuvaran CCPP 3*	1,850	1,849
12	Utran Extension*	1,850	1,771
13	Ukai 6*	2,385	2,323

* PPA Governed Station

3.7. SPECIFIC FUEL OIL CONSUMPTION

3.7.1. The actual Specific Oil Consumption recorded by GSECL during FY 2018-19 are mentioned below:

3.7.2. It may be noted that the Specific Oil Consumption is calculated in terms of percentage of total calorific requirement of the power generating unit and has relation with the size of the generating unit. For the lower size units, the Specific Oil Consumption remains higher as compared to larger size power generating units, because certain amount of Specific Oil consumption remains fixed irrespective of the size of the generating unit. As most of the units of GSECL power stations are smaller in size, Specific Oil Consumption of these plants is generally high.

3.7.3. For true-up, the factors impacting SFC consumption of GSECL stations & reasons for deviation from norms are as below:

- **Ukai (3-5):** Start-Stop due to Reserved Shutdown
- **Sikka (3-4):** Start-Stop due to Reserved Shutdown

- **KLTPS 1-3:** Higher forced outages and Non availability of coal mills due to poor lignite quality

Table 14 : Specific oil consumption

In ml/KWh

Sr. No.	Power Station	FY 2018-19	
		Approved	GSECL (Actual)
1	Ukai (3-5)	1.00	1.01
2	Gandhinagar (3-4)	1.00	0.84
3	Gandhinagar 5*	3.50	0.46
4	Wanakbori 1-6 TPS	1.00	0.87
5	Wanakbori 7*	3.50	0.17
6	Sikka Extension (3-4)*	1.00	1.13
7	KLTPS 1-3	3.00	14.02
8	KLTPS 4	3.00	1.63
9	Ukai 6*	1.00	0.26

*PPA Governed Station

3.8. TRANSIT LOSS

- 3.8.1. Approved Transit loss for 2018-19 and Actual Transit loss for FY 2018-19 has been mentioned below:

Table 15 : Transit loss

Sr. No.	Power Station	FY 2018-19	
		Approved	GSECL (Actual)
1	Ukai (3-5)	0.80%	0.36%
2	Gandhinagar (3-4)	0.80%	0.32%
3	Gandhinagar 5*	0.80%	0.32%
4	Wanakbori 1-6 TPS	0.80%	0.41%
5	Wanakbori 7*	0.80%	0.41%
6	Sikka Extension (3-4)*	0.00%	0.00%
7	KLTPS 1-3	0.20%	0.18%
8	KLTPS 4	0.20%	0.18%
9	Ukai 6*	0.80%	0.36%

* PPA Governed Station.

3.9. NET GENERATION

- 3.9.1. Based on plant load factor and auxiliary consumption discussed in aforesaid sections, the gross generation & net generation for GSECL stations for FY 2018-19 has been mentioned below:

**Table 16 : Station wise net generation for True-up**

Sr. No.	Station	Gross Generation (MU)	FY 2018-19	
			Aux. Consumption (MU)	Net Generation (MU)
1	Ukai (3-5)	3,911.68	373.39	3,538.29
2	Gandhinagar (3-4)	2,233.59	235.85	1,997.74
3	Gandhinagar 5*	1,470.40	141.78	1,328.62
4	Wanakbori 1-6 TPS	6,837.79	622.79	6,215.00
5	Wanakbori 7*	1,505.34	138.04	1,367.30
6	Sikka Extension (3-4)*	2,725.91	258.66	2,467.25
7	KLTPS 1-3	885.92	137.09	748.83
8	KLTPS 4	319.45	72.64	246.81
9	Dhuvaran CCPP 1*	139.09	10.23	128.86
10	Dhuvaran CCPP 2	282.25	19.33	262.92
11	Dhuvaran CCPP 3*	280.65	16.95	263.70
12	Utran Extension*	418.21	17.73	400.48
13	Ukai 6*	3,025.29	182.88	2,842.41
14	Ukai Hydro	221.55	2.64	218.91
15	Kadana Hydro	241.38	1.83	239.55
Total		24,498.50	2,231.83	22,266.67

*PPA based stations

3.10. FUEL RELATED PARAMETERS

3.10.1. The table below summaries actual value of weighted average Gross Calorific Value of primary fuels and secondary fuel recorded by GSECL along with approved GCV for primary & secondary fuel, coal mix for FY 2018-19 is mentioned below:



Table 17 : Summary of fuel related parameters

Sr. No.	Station	Mix of Coal (%)			Wt. Av. GCV of Lignite Coal (Kcal/Kg)	Wt. Av. GCV of Coal (Kcal/Kg)	Wt. Av. GCV of Gas (Kcal/Scm)	Wt. Av. GCV of Oil (Kcal/kl)
		Indiginous	Washed	Imported				
1	Ukai (3-5)	27.17%	56.24%	16.60%		4,003	10,461	
2	Gandhinagar (3-4)	27.80%	57.37%	14.83%		3,960	10,438	
3	Gandhinagar 5*	25.44%	58.49%	16.07%		4,014	10,452	
4	Wanakbori 1-6 TPS	25.94%	53.81%	20.25%		4,010	10,356	
5	Wanakbori 7 TPS	24.81%	55.01%	20.18%		4,074	10,353	
6	Sikka TPS	0.00%	0.00%	0.00%		-	-	
7	Sikka Extension (3-4)*	0.00%	0.77%	99.23%		5,105	10,314	
8	KLTPS 1-3				2,308		10,220	
9	KLTPS 4				2,300		10,644	
10	Dhuvaran CCPP 1*					9,586		
11	Dhuvaran CCPP 2					9,539		
12	Dhuvaran CCPP 3*					9,329		
13	Utran Extension*					9,330		
14	Ukai 6*	12.89%	67.63%	19.48%		4,117	10,440	

*PPA based stations

3.10.2. The Fuel related parameters mentioned above have been used for computation of variable cost for GSECL stations.

3.10.3. The summary of actual coal prices for FY 2018-19 along with mix of coal for the year is shown in following table.



Table 18 : Summary of fuel prices for FY 2018-19

Sr. No.	Station	Wt. Av. Cost of Indigenous Coal (Rs./MT)	Wt. Av. Cost of Washed Coal (Rs./MT)	Wt. Av. Cost of Imported Coal (Rs./MT)	Wt. Av. Cost of Lignite Coal (Rs./MT)	Wt. Av. Cost of Gas (Rs./Scm)	Wt. Av. Cost of Oil (Rs./kl)
1	Ukai (3-5)	4,272	4,809	8,093			35,823
2	Gandhinagar (3-4)	4,670	5,239	7,891			35,293
3	Gandhinagar 5*	4,756	5,382	7,968			35,293
4	Wanakbori 1-6 TPS	4,427	5,191	7,921			37,330
5	Wanakbori 7*	4,558	5,272	7,947			37,330
6	Sikka TPS	-	-	-			-
7	Sikka Extension (3-4)*	-	5,264	8,025			40,820
8	KLTPS 1-3				1,460		46,507
9	KLTPS 4				1,592		46,507
10	Dhuvaran CCPP 1*					12.32	
11	Dhuvaran CCPP 2					14.26	
12	Dhuvaran CCPP 3*					29.90	
13	Utran Extension*					33.43	
14	Ukai 6*	4,217	4,926	8,224			32,181

*PPA based stations

3.10.4. The GSECL requests the Hon'ble Commission to approve the variable cost parameters as outlined above and any variation in the fuel mix, quality and rate will be affecting the variable cost accordingly.

**SECTION 4. TRUE UP OF FY 2018-19****4.1. PREAMBLE**

- 4.1.1. This section outlines the actual performance of GSECL for FY 2018-19. In line with the provisions of the GERC MYT regulations 2016, GSECL hereby submits a detailed Actual Performance for 2018-19 comparing with the figures approved by the Hon'ble Commission vide "MYT Order dated 31st March, 2017".
- 4.1.2. In line with the provisions under MYT Regulations, 2016 GSECL has filed this True Up Petition for the year FY 2018-19, wherein, GSECL is submitting actual performance for FY 2018-19 vis-à-vis its comparison with parameters approved for FY 2018-19 by the Hon'ble Commission.
- 4.1.3. For the purpose of True-Up all the expense heads have been categorized into Controllable and Uncontrollable factors as shown in the following sections. A head wise comparison has been made between the values approved by the Hon'ble Commission vide "MYT Order dated 31st March, 2017" and the actual values for various expenditures for FY 2018-19.
- 4.1.4. GSECL has worked out its Aggregate Revenue Requirement (ARR) for FY 2018-19 as a part of the True Up for FY 2018-19. GSECL has presented the actual cost components based on audited annual accounts for FY 2018-19.

4.2. COMPUTATION OF FUEL EXPENSES FOR FY 2018-19

- 4.2.1. Based on operating and fuel related parameters estimated by GSECL during FY 2018-19, plant wise fuel expenses arrived are tabulated below.

Table 19 : Fuel expenses for FY 2018-19

Sr. No.	Power Station	Net Generation (Actual) (MU)	Fuel Cost (Approved) (Rs. Crores)	Fuel Cost (Actual) (Rs. Crores)
1	Ukai (3-5)	3,538.29	1,344.58	1,299.39
2	Gandhinagar (3-4)	1,997.74	806.27	789.26
3	Gandhinagr 5*	1,328.62	521.00	519.86
4	Wanakbori 1-6 TPS	6,215.00	2,509.29	2,421.73
5	Wanakbori 7*	1,367.30	529.15	513.03
6	Sikka Extension (3-4)*	2,467.25	1,026.04	1,098.27
7	KLTPS 1-3	748.83	184.49	236.15
8	KLTPS 4	246.81	61.65	68.84
9	Dhuvaran CCPP 1*	128.86	33.65	37.39
10	Dhuvaran CCPP 2	262.92	78.99	90.39
11	Dhuvaran CCPP 3*	263.70	161.20	166.32
12	Utran Extension*	400.48	273.69	265.39
13	Ukai 6*	2,842.41	970.40	938.76
Total			8,500.41	8,444.79

*PPA based stations



4.3. ENERGY CHARGES FOR FY 2018-19

4.3.1. Based on operating parameters and actual fuel cost, Energy Charges for FY 2018-19 for GSECL's power stations are mentioned below.

Table 20 : Energy charges for FY 2018-19

Sr. No.	Power Station	Approved (Rs/kWh)	Actual (Rs/kWh)
1	Ukai (3-5)	3.80	3.67
2	Gandhinagar (3-4)	4.04	3.95
3	Gandhinagr 5*	3.92	3.91
4	Wanakbori 1-6 TPS	4.04	3.90
5	Wanakbori 7*	3.87	3.75
6	Sikka Extension (3-4)*	4.16	4.45
7	KLTPS 1-3	2.46	3.15
8	KLTPS 4	2.50	2.79
9	Dhuvaran CCPP 1*	2.61	2.90
10	Dhuvaran CCPP 2	3.00	3.44
11	Dhuvaran CCPP 3*	6.11	6.31
12	Utran Extension*	6.83	6.63
13	Ukai 6*	3.41	3.30

* PPA Governed Station

Note: Approved cost has been computed based on actual fuel cost & approved operational parameters by the Commission

4.4. GAINS/ (LOSSES) FROM FUEL EXPENSES ON ACCOUNT OF EFFICIENCY

4.4.1. For the purpose of True Up and for determination of gains or losses on account of operational performance of the generating stations, GSECL has derived fuel expenses considering performance parameters such as auxiliary consumption, station heat rate, specific oil consumption and transit loss as approved by the Hon'ble Commission in "MYT Order dated 31st March, 2017" and considering the actual fuel related parameters such as GCV of fuel and price of fuels etc. recorded by GSECL. The fuel expenses so derived have been compared with the fuel expenses actually incurred with actual performance parameters of GSECL for identification of gains/ losses on account of efficiency of these performance parameters. Thus, based on the same, GSECL's gain/ (losses) is Rs. 79.51 Crores in fuel expenses on account of operational efficiencies during FY 2018-19. The same would be treated appropriately in line with the provisions of the MYT regulations.

Table 21 : Gains/ (losses) from fuel efficiency

Sr. No.	Power Station	Fuel Cost with Approved Operational Parameters	Fuel Cost Incurred by GSECL	Rs. Crores	
				Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	1,344.58	1,299.39	45.19	
2	Gandhinagar (3-4)	806.27	789.26	17.01	
3	Gandhinagr 5*	521.00	519.86		
4	Wanakbori 1-6 TPS	2,509.29	2,421.73	87.56	



Sr. No.	Power Station	Fuel Cost with Approved Operational Parameters	Fuel Cost Incurred by GSECL	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
5	Wanakbori 7*	529.15	513.03		
6	Sikka Extension (3-4)*	1,026.04	1,098.27		
7	KLTPS 1-3	184.49	236.15	(51.66)	
8	KLTPS 4	61.65	68.84	(7.19)	
9	Dhuvaran CCPP 1*	33.65	37.39		
10	Dhuvaran CCPP 2	78.99	90.39	(11.40)	
11	Dhuvaran CCPP 3*	161.20	166.32		
12	Utran Extension*	273.69	265.39		
13	Ukai 6*	970.40	938.76		
Total		8,500.41	8,444.79	79.51	-

* PPA Governed Station

4.5. CAPITAL EXPENDITURE

4.5.1. The actual capitalization for FY 2018-19 is as given below:

Table 22 : Actual capitalization for FY 2018-19

Sr. No.	Station	Particular	CAPITALISATION
			FY 2018-19
			Actuals
1	Ukai (3-5)	Debt	24.07
		Equity	10.32
		Total	34.39
2	Gandhinagar (3-4)	Debt	18.29
		Equity	7.84
		Total	26.12
3	Gandhinagar 5*	Debt	-
		Equity	-
		Total	-
4	Wanakbori 1-6 TPS	Debt	129.83
		Equity	55.64
		Total	185.47
5	Wanakbori 7*	Debt	-
		Equity	-
		Total	-
6	Sikka Extension (3-4)*	Debt	15.85
		Equity	6.79
		Total	22.64
7	KLTPS 1-3	Debt	26.78
		Equity	11.48
		Total	38.26
8	KLTPS 4	Debt	14.13
		Equity	6.06
		Total	20.18



Sr. No.	Station	Particular	CAPITALISATION
			FY 2018-19
			Actuals
9	Dhuvaran CCPP 1*	Debt	-
		Equity	-
		Total	-
10	Dhuvaran CCPP 2	Debt	1.01
		Equity	0.43
		Total	1.44
11	Dhuvaran CCPP 3*	Debt	-
		Equity	-
		Total	-
12	Utran Extension*	Debt	1.75
		Equity	0.75
		Total	2.50
13	Ukai 6*	Debt	16.94
		Equity	7.26
		Total	24.20
14	Ukai Hydro	Debt	1.27
		Equity	0.54
		Total	1.81
15	Kadana Hydro	Debt	3.34
		Equity	1.43
		Total	4.77
16	Total	Debt	253.25
		Equity	108.54
		Total	361.79

4.6. FIXED COST FOR FY 2018-19

4.6.1. Based on the Capital Cost and the consequent Capitalized Expenditure the funding of the capital expenditure through debt & equity, etc. the actual figures for fixed cost of GSECL for FY 2018-19 have been outlined thereof. As outlined under the Regulations, the fixed cost for GSECL has been categorized under the following heads:

- Depreciation
- Interest and Finance Charges
- Return on Equity
- Operation and Maintenance Expenses
- Interest on Working Capital
- Water Charges
- SLDC Charges
- Tax
- Non-Tariff Income

4.6.2. For FY 2018-19, GSECL has determined actual fixed cost for its generating stations on the basis of Gujarat Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2016, and annual audited accounts for FY 2018-19.



Table 23 : Actual fixed cost for GSECL for FY 2018-19

Sr. No.	Power Station	Depreciation (Actual)	Interest & Finance Charges (Actual)	Return on Equity (Actual)	Interest on Working Capital (Actual)	O&M Expenses (Actual)	Water Charges (Actual)	SLDC Charges (Actual)	Tax (Actual)	Total Fixed Cost (Actual)	Rs. Crores	
											Non-Tariff Income (Actual)	Net Fixed Charges
1	Ukai (3-5)	40.88	-	20.96	39.10	214.10	-	0.11	2.68	317.84	26.39	291.45
2	Gandhinagar (3-4)	30.12	-	21.95	29.51	135.24	44.88	0.11	1.85	263.66	25.99	237.67
3	Gandhinagr 5*	-	-	28.67	14.23	33.15	29.55	-	0.92	106.53	13.59	92.93
4	Wanakbori 1-6 TPS	83.94	23.83	83.52	87.76	235.58	56.57	0.22	5.54	576.96	40.42	536.55
5	Wanakbori 7*	-	-	26.16	13.97	19.37	11.26	0.04	0.92	71.71	7.59	64.13
6	Sikka Extension (3-4)*	179.03	148.76	139.57	42.09	115.50	4.60	0.09	2.20	631.85	4.89	626.96
7	KLTPS 1-3	32.20	1.76	51.10	10.30	132.26	0.27	0.04	0.94	228.88	3.44	225.43
8	KLTPS 4	35.88	13.08	29.18	3.92	15.45	0.10	0.01	0.33	97.95	-	97.95
9	Dhuvaran CCPP 1*	9.70	-	10.45	4.93	35.10	0.00	0.02	0.47	60.67	0.62	60.05
10	Dhuvaran CCPP 2	22.26	5.02	14.19	5.88	35.10	-	0.02	0.49	82.95	0.62	82.33
11	Dhuvaran CCPP 3*	78.77	71.16	67.01	34.78	2.26	-	0.07	1.65	255.70	0.19	255.51
12	Utran Extension*	68.21	37.26	57.43	37.54	41.21	2.20	0.07	1.65	245.56	0.96	244.60
13	Ukai 6*	153.96	105.95	124.33	35.96	47.70	-	0.10	2.20	470.19	5.02	465.18
14	Ukai Hydro	2.24	2.15	10.56	0.67	10.60	-	0.05	1.34	27.62	0.01	27.61
15	Kadana Hydro	5.34	-	28.67	1.20	23.03	-	0.04	1.06	59.35	0.47	58.87
Total		742.52	408.97	713.77	361.86	1,095.65	149.42	0.99	24.24	3,497.42	130.20	3,367.22

* PPA Governed Station



4.6.3. In "MYT Order dated 31st March, 2017", the Hon'ble Commission had approved fixed cost for GSECL's power stations for FY 2018-19 as mentioned below.

Table 24 : Approved fixed cost for GSECL for FY 2018-19

(Rs. Crores)

Sr. No.	Power Station	Depreciation	Interest & Finance Charges	Return on Equity	Interest on Working Capital	O&M Expenses	Water charges	SLDC Charges	MAT	Total Fixed Cost	Non-Tariff Income (Actual)	Net Fixed Charges
1	Ukai (3-5)	63.01	28.08	18.32	30.03	164.71	0.10	0.60	3.47	308.31	15.87	292.45
2	Gandhinagar (3-4)	55.98	6.67	17.44	22.36	91.61	7.01	0.50	2.39	203.95	12.50	191.46
3	Gandhinagar 5*	-	-	30.88	14.64	23.34	11.87	0.05	1.19	81.98	11.93	70.05
4	Wanakbori 1-6 TPS	111.88	20.92	82.76	66.86	239.70	35.76	0.81	7.17	565.87	46.29	519.57
5	Wanakbori 7*	-	-	28.03	11.44	19.37	8.18	0.05	1.19	68.27	6.75	61.52
6	Sikka Extension (3-4)*	172.90	179.22	137.53	29.30	101.05	1.19	0.23	2.84	624.26	9.60	614.65
7	KLTPS 1-3	66.18	0.01	48.76	8.65	114.81	0.43	0.17	1.22	240.23	4.84	235.38
8	KLTPS 4	36.18	15.85	29.32	3.36	19.67	0.13	0.02	0.43	104.96	1.65	103.31
9	Dhuvaran CCPP 1*	21.24	-	11.07	5.19	33.45	0.21	0.05	0.61	71.83	1.74	70.09
10	Dhuvaran CCPP 2	21.95	8.46	15.87	5.81	33.54	0.76	0.05	0.64	87.08	1.81	85.27
11	Dhuvaran CCPP 3*	76.43	79.65	65.36	13.10	69.65	-	0.17	2.14	306.51	4.32	302.19
12	Utran Extension*	66.54	44.32	57.60	19.18	55.50	3.64	0.14	2.13	249.05	5.69	243.36
13	Ukai 6*	141.13	126.61	122.46	29.92	101.05	0.10	0.34	2.84	524.46	12.71	511.75
14	Ukai Hydro	-	2.55	10.42	0.72	20.21	-	0.17	1.73	35.81	3.51	32.30
15	Kadana Hydro	15.73	-	28.69	1.29	24.34	-	0.15	1.38	71.57	3.06	68.51
16	Wanakbori 8*	117.88	144.37	93.77	46.77	137.43	-	-	-	540.20	-	540.20
Total		967.03	656.70	798.28	308.62	1,249.44	69.39	3.50	31.37	4,084.33	142.26	3,942.07

* PPA governed Station



4.7. GAINS/ (LOSSES) FROM FIXED COST COMPONENTS

4.7.1. GSECL has indicated the actual performance for FY 2018-19 for various cost components. The comparison of the actual value for fixed cost components for FY 2018-19 and the cost approved by the Hon'ble Commission has been done to arrive at the gains or losses for each of the element of the fixed cost of GSECL, which has been discussed in detail in subsequent paragraphs.

4.8. GAIN/ LOSSES FROM DEPRECIATION

4.8.1. GSECL has computed depreciation of its generating stations by considering the closing gross fixed assets (GFA) of FY 2017-18 as opening gross fixed assets for FY 2018-19 except for Sikka 3-4 & Dhuvaran CCPP 3 (PPA-Based Units).

4.8.2. The Hon'ble Commission in its Tariff Order in Case no. 1460 of 2014 dated 31 March, 2015 had provisionally approved the GFA for Sikka 3-4 and Dhuvaran CCPP 3 for FY 2015-16 as the actual Capital Cost of the said units were not approved at that time. Thereafter in the subsequent Tariff Orders, the GFA of aforesaid plants has been worked out and approved by the Hon'ble Commission considering the provisional approved capital cost. However, the Hon'ble Commission recently in its Order in Petition No. 1597 of 2016 dated 21 August, 2018 and in Petition No. 1602 of 2016 dated 19 August, 2019 has approved the actual Capital Cost for Sikka 3-4 and Dhuvaran CCPP 3 respectively. Further, in the said Order the Hon'ble Commission also directed GSECL to consider the approved cost in the Tariff petition accordingly.

4.8.3. Considering the above, GSECL has revised the opening GFA of FY 2018-19 based on the approved Capital Cost as against the provisional Capital Cost considered as initially considered in Tariff determination for FY 2015-16. The opening GFA of FY 2018-19 has been worked out by considering the approved capital cost and then adjusting the capital addition or deletion as approved by the Hon'ble Commission in the subsequent True-up years. The detailed working of GFA of aforesaid plants have been shown in the Tables below:

Table 25: Approved Capital Cost of Sikka 3-4

		(Rs. Crores)
Particulars	%	Cost
Debt	70%	2256.18
Equity	30%	966.93
Total		3223.11

Table 26: Approved Capital Cost of Dhuvaran CCPP 3

		(Rs. Crores)
Particulars	%	Cost
Debt	70%	1126.03
Equity	30%	482.58
Total		1608.61



Table 27 : GFA Details of Sikka 3-4

					Rs. Crore
Sr. No.	Particular	FY2015-16	FY2016-17	FY2017-18	FY2018-19
1	GFA at the Beginning of Year	-	3223.11	3255.60	3311.70
2	Approved Capital Addition	3223.11	32.49	56.20	-
3	Approved Deletion	-	-	0.10	-
4	Closing GFA	3223.11	3255.60	3311.70	3311.70
Average GFA		1611.56	3239.36	3283.65	3311.70

* As approved in respective Tariff Orders

Table 28 : GFA Details of Dhuvaran CAPP-3

					Rs. Crore
Sr. No.	Particular	FY2015-16	FY2016-17	FY2017-18	FY2018-19
1	GFA at the Beginning of Year	-	1608.61	1594.71	1595.56
2	Approved Capital Addition	1608.61	-	0.85	-
3	Approved Deletion	-	13.90	-	-
4	Closing GFA	1608.61	1594.71	1595.56	1595.56
Average GFA		804.31	1601.66	1595.14	1595.56

* As approved in respective Tariff Orders

4.8.4. The closing GFA for all generating stations during FY 2018-19 has been worked out by adding the assets capitalized during the FY 2018-19 and deducting the assets retired or transferred from the opening balance of GFA.

4.8.5. Further, the Hon'ble Commission in its previous true-up Order of FY 2017-18 dated 24th April, 2019 had disallowed the depreciation for GTPS-5 (Rs. 2.16 Crore) and Wanakbori 7 (Rs. 2.13 Crore) stating that these two stations have been depreciated up to 90% of its GFA value. Accordingly, GSECL has not considered the depreciation pertaining to aforesaid units in the present petition.

4.8.6. Based on above the actual depreciation claimed for FY 2018-19 worked out at Rs. 742.52 Crore as against the approved depreciation of Rs. 849.15 Crore. The actual depreciation claim by GSECL is excluding RE depreciation and depreciation associated with GTPS-5 and Wanakbori 7 as stated above.

4.8.7. Further, as per the audited annual accounts (Note. 2.1) the depreciation for the FY 2018-19 is Rs. 989.87 Crore which is inclusive of total RE depreciation amounting Rs. 9.58 Crore, depreciation associated with GTPS-5 and Wanakbori 7 amounting together to Rs. 4.30 and depreciation of BLTPS amounting to Rs. 233.47 Crore.

4.8.8. GSECL has calculated the Depreciation for FY 2018-19 in accordance with the provisions of the MYT Regulations, 2016 and as per the directives of the Hon'ble Commission. Overall, the depreciation of GSECL for the FY 2018-19 is within the values approved by the Hon'ble Commission and request the Hon'ble Commission to approve the same



- 4.8.9. The Hon'ble Commission in its previous Orders has considered the parameters that impacts the depreciation as uncontrollable. Accordingly, the Hon'ble Commission has allowed the gain/(loss) on account of depreciation. Based on the classification of cost elements into controllable and uncontrollable elements in line with the provisions of the MYT regulations, GSECL has incurred a gain/ (loss) of Rs. 118.06 Crores due to variation in actual value of depreciation against the cost approved by the Hon'ble Commission. GSECL has not claimed any gain / (loss) in respect of PPA governed stations.
- 4.8.10. The comparison of the actual value for depreciation during FY 2018-19 with the value approved by the Hon'ble Commission is as outlined below.

Table 29 : Gain/ (losses) from depreciation for FY 2018-19

					Rs. Crore
Sr. No.	Power Station	Depreciation (Approved)	Depreciation (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Un-controllable Factor
1	Ukai (3-5)	63.01	40.88		22.13
2	Gandhinagar (3-4)	55.98	30.12		25.86
3	Gandhinagr 5*	-	-		
4	Wanakbori 1-6 TPS	111.88	83.94		27.94
5	Wanakbori 7*	-	-		
6	Sikka Extension (3-4)*	172.90	179.03		
7	KLTPS 1-3	66.18	32.20		33.98
8	KLTPS 4	36.18	35.88		0.30
9	Dhuvaran CCPP 1*	21.24	9.70		
10	Dhuvaran CCPP 2	21.95	22.26		(0.31)
11	Dhuvaran CCPP 3*	76.43	78.77		
12	Utran Extension*	66.54	68.21		
13	Ukai 6*	141.13	153.96		
14	Ukai Hydro	-	2.24		(2.24)
15	Kadana Hydro	15.73	5.34		10.39
Total		849.15	742.52	-	118.06

* PPA based Station

4.9. GAIN/ LOSSES FROM INTEREST & FINANCE CHARGES

- 4.9.1. GSECL has worked out interest and finance charges for its different generating stations by considering the closing loan balance of FY 2017-18 as approved in the true-up Order as opening loan balance for FY 2018-19 except for Sikka 3-4 and Dhuvaran CCPP 3. In case of Sikka 3-4 and Dhuvaran CCPP 3 as already explained in para above that the Hon'ble Commission has approved the Capital cost. Considering this approved cost and on the basis of revised GFA, GSECL has worked out the revised opening loan balance of aforesaid units. Repayment has been considered as minimum of depreciation computed or opening loan plus addition in loan for the FY 2018-19 in line with the approach as adopted by the Hon'ble Commission.



- 4.9.2. The weighted average rate of interest has been worked out in line with the Regulation 38.5 of GERC MYT Regulation, 2016.
- 4.9.3. Accordingly, the total interest and finance charges for FY 2018-19 stands at Rs. 408.97 Crore.
- 4.9.4. The parameters which impact the interest and finance charges has been considered as “uncontrollable” by the Hon’ble Commission in the true up for previous years. Taking the above into consideration, GSECL has considered the gains/losses on account in Interest and Finance Charges into “Uncontrollable” factors.
- 4.9.5. GSECL has incurred total Interest & finance charges for FY 2018-19 as Rs. 408.97 Crores in comparison to the approved costs of Rs. 512.34 Crores leading to an uncontrollable gain/ (loss) of Rs. 36.74 Crores.
- 4.9.6. The comparison of the actual value for Interest and Finance Charges during FY 2018-19 is mentioned as below.

Table 30 : Gain/ (losses) from Interest & finance charges for FY 2018-19

Rs. Crores					
Sr. No.	Power Station	Interest & Finance Charges (Approved)	Interest & Finance Charges (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	28.08	-	-	28.08
2	Gandhinagar (3-4)	6.67	-	-	6.67
3	Gandhinagr 5*	-	-	-	-
4	Wanakbori 1-6 TPS	20.92	23.83	-	(2.91)
5	Wanakbori 7*	-	-	-	-
6	Sikka Extension (3-4)*	179.22	148.76	-	-
7	KLTPS 1-3	0.01	1.76	-	(1.75)
8	KLTPS 4	15.85	13.08	-	2.77
9	Dhuvaran CCPP 1*	-	-	-	-
10	Dhuvaran CCPP 2	8.46	5.02	-	3.44
11	Dhuvaran CCPP 3*	79.65	71.16	-	-
12	Utran Extension*	44.32	37.26	-	-
13	Ukai 6*	126.61	105.95	-	-
14	Ukai Hydro	2.55	2.15	-	0.40
15	Kadana Hydro	-	-	-	-
Total		512.34	408.97	-	36.71

* PPA based Station

4.10. GAIN/ LOSSES FROM RETURN ON EQUITY

- 4.10.1. GSECL has computed Return on Equity considering the RoE rate of 13% for GTPS-5, WTPS-7 and Dhuvaran CCPP 1, as per their PPA, and RoE rate of 14% for all other stations. Further, the opening equity balance of Sikka 3-4 and Dhuvaran CCPP 3 has been revised considering the approved Capital cost as mentioned in para above.
- 4.10.2. The comparison of the actual value for Return on Equity (RoE) computed on basis of the opening equity for FY 2018-19 and, additions to equity during the year on account of funding of capitalization in comparison to the RoE approved by the



Hon'ble Commission in MYT Order dated 31st March, 2017 has resulted in uncontrollable loss of Rs. (8.56) Crore to GSECL as mentioned below.

Table 31 : Gain/ (losses) from Return on Equity for FY 2018-19

Rs. Crores					
Sr. No.	Power Station	Return on Equity (Approved)	Return on Equity (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	18.32	20.96	-	(2.64)
2	Gandhinagar (3-4)	17.44	21.95	-	(4.51)
3	Gandhinagr 5*	30.88	28.67	-	
4	Wanakbori 1-6 TPS	82.76	83.52	-	(0.76)
5	Wanakbori 7*	28.03	26.16	-	
6	Sikka Extension (3-4)*	137.53	141.73	-	
7	KLTPS 1-3	48.76	51.10	-	(2.34)
8	KLTPS 4	29.32	29.18	-	0.14
9	Dhuvaran CCPP 1*	11.07	10.45	-	
10	Dhuvaran CCPP 2	15.87	14.19	-	1.68
11	Dhuvaran CCPP 3*	65.36	64.81	-	
12	Utran Extension*	57.60	57.43	-	
13	Ukai 6*	122.46	124.33	-	
14	Ukai Hydro	10.42	10.56	-	(0.14)
15	Kadana Hydro	28.69	28.67	-	0.02
Total		704.51	713.73	-	(8.56)

* PPA based Station

4.10.3. The above variation is treated on account of uncontrollable factors in line with the provisions of the MYT Regulations and accordingly the treatment for sharing of gains has been proposed.

4.11. GAIN/ LOSSES FROM O&M EXPENSES

4.11.1. The Operation and Maintenance expenses consist of Employee expenses, Repair & Maintenance expenses (R&M) and Administrative & General expenses (A&G). The actual Employee expenses incurred by GSECL as per the audited Annual Accounts (Note No. 33) is Rs. 698.36 Crore. Further, the expenses on account of Remeasurement of Defined Benefit Plans in respect of employees is Rs. 38.51 Crore as per Profit and Loss Statement of GSECL for FY 2018-19. Accordingly, the total employee expenses of GSECL for FY 2018-19 worked out as Rs. 736.88 Crore.

4.11.2. The Employee expenses have been classified as "controllable" in the true up for previous years. GSECL in this present petition has claimed Employee expenses of Rs. 658.37 Crore which has been arrived after excluding the employee expenses of Rs. 4.85 Crore towards BECL, employee expenses of Rs. 22.44 Crore (inclusive of 7th Pay arrears) towards SSHEP & SPS and employee expenses of Rs. 0.69 Crore towards RE assets.

4.11.3. Further, the Hon'ble Commission in its previous True-up Orders had not approved the provisions towards the impact of 7th Pay Commission on the ground that no actual payment was made to the employees and that the actual impact of 7th Pay



Commission shall be allowed as “uncontrollable” in the true-up of that year in which the actual payment is made. Accordingly, GSECL wishes to submit that during the FY 2018-19 it has made actual payment of Rs. 96.04 Crore (excluding SSSNL) to employees of on account of 7th Pay Commission. Considering the impact of this uncontrollable payment, GSECL has worked out a loss of Rs. 96.04 Crore for all of its stations. Further, GSECL has also negated the provision of Rs. 50.54 Crore in line with the Hon’ble Commission’s approach, which was made towards 7th Pay. Accordingly, the net total employee expenses have been claimed as Rs. 658.37 Crore (i.e., Rs. 736.88 Crore – Rs. 4.85 Crore – Rs. 22.44 Crore – Rs. 0.69 Crore – Rs. 50.54 Crore).

- 4.11.4. The R&M expenses for FY 2018-19 as per audited Annual Account (Note No. 35) is Rs. 389.06 Crore. GSECL has claimed R&M expenses of Rs. 321.22 Crore which has been arrived after excluding the R&M expenses amounting to Rs. 67.84 Crore towards BECL (Rs.50.39 Crore), SSHEP & SPS (Rs. 15.07 Crore) and RE assets (Rs. 2.39 Crore).
- 4.11.5. The A&G expenses as per audited Annual Accounts (Note No. 35) is Rs. 131.61 Crore net of expenses capitalized. GSECL has claimed A&G expenses of Rs. 116.05 Crore arrived after excluding all other A&G expenses towards BECL, SSHEP & SPS and RE assets.
- 4.11.6. Considering the above, the total O&M expenses claimed is Rs. 1095.65 Crore (i.e., Rs. 658.37 Crore + Rs. 321.22 Crore + Rs. 116.05 Crore). As the O&M expenses have been classified as “Controllable”, GSECL has worked out a loss of Rs. 32.53 Crore. Overall GSECL has claimed a loss of Rs. 32.53 Crore due to controllable factors and a loss of Rs. 96.04 Crore by comparing the actual amount with the O&M expenses approved by the Commission in the MYT Order.

Table 32 : Gain/ (losses) from O&M expenses for FY 2018-19

Rs. Crores					
Sr. No.	Power Station	O&M Expenses (Approved)	O&M Expenses (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	164.71	214.10	(37.67)	(11.73)
2	Gandhinagar (3-4)	91.61	135.24	(29.78)	(13.85)
3	Gandhinagr 5*	23.34	33.15		(6.92)
4	Wanakbori 1-6 TPS	239.70	235.58	24.74	(20.62)
5	Wanakbori 7*	19.37	19.37		(3.44)
6	Sikka Extension (3-4)*	101.05	115.50		(8.74)
7	KLTPS 1-3	114.81	132.26	(12.33)	(5.13)
8	KLTPS 4	19.67	15.45	6.01	(1.79)
9	Dhuvaran CCPP 1*	33.45	35.10		(3.04)
10	Dhuvaran CCPP 2	33.54	35.10	1.48	(3.04)
11	Dhuvaran CCPP 3*	69.65	2.26		-
12	Utran Extension*	55.50	41.21		(4.05)
13	Ukai 6*	101.05	47.70		(9.61)
14	Ukai Hydro	20.21	10.60	11.23	(1.63)
15	Kadana Hydro	24.34	23.03	3.77	(2.46)
Total		1,112.00	1,095.65	(32.53)	(96.04)

* PPA based Station

4.12. GAIN/ LOSSES FROM INTEREST ON WORKING CAPITAL

4.12.1. The Hon'ble Commission has considered the gains/losses arising from Interest on Working Capital as Uncontrollable in the previous year true ups. The Working Capital has been computed as per provisions of GERC MYT Regulations, 2016. Proposed sharing of gains/losses from IWC are as follows:

Table 33 : Gain/ (losses) from Interest on working capital for 2018-19

Rs. Crores					
Sr. No.	Power Station	Interest on Working Capital (Approved)	Interest on Working Capital (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	30.03	39.10		(9.07)
2	Gandhinagar (3-4)	22.36	29.51		(7.15)
3	Gandhinagr 5*	14.64	14.23		
4	Wanakbori 1-6 TPS	66.86	87.76		(20.90)
5	Wanakbori 7*	11.44	13.97		
6	Sikka Extension (3-4)*	29.30	42.09		
7	KLTPS 1-3	8.65	10.30		(1.65)
8	KLTPS 4	3.36	3.92		(0.56)
9	Dhuvaran CCPP 1*	5.19	4.93		
10	Dhuvaran CCPP 2	5.81	5.88		(0.07)
11	Dhuvaran CCPP 3*	13.10	34.78		
12	Utran Extension*	19.18	37.54		
13	Ukai 6*	29.92	35.96		
14	Ukai Hydro	0.72	0.67		0.05
15	Kadana Hydro	1.29	1.20		0.09
Total		261.85	361.86	-	(39.27)

4.12.2. As per the First Amendment to the GERC MYT Regulations, 2016, dated 2nd December, 2016, GSECL has considered the weighted average of 1-year SBI MCLR for FY 2018-19 plus 250 basis points i.e. 10.89%, as the interest rate to compute the interest on working capital.

4.13. GAIN/ LOSSES FROM SLDC CHARGES

4.13.1. The Hon'ble Commission has considered the gains/losses arising from SLDC Charges as Uncontrollable in its previous year true ups. Proposed sharing of gains/losses from SLDC Charges are as follows:

Table 34 : Gain/ (losses) from SLDC charges for FY 2018-19

Rs. Crores					
Sr. No.	Power Station	SLDC Charges (Approved)	SLDC Charges (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	0.60	0.11	-	0.49
2	Gandhinagar (3-4)	0.50	0.11	-	0.39



Sr. No.	Power Station	SLDC Charges (Approved)	SLDC Charges (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
3	Gandhinagr 5*	0.05	-		
4	Wanakbori 1-6 TPS	0.81	0.22	-	0.59
5	Wanakbori 7*	0.05	0.04		
6	Sikka Extension (3-4)*	0.23	0.09		
7	KLTPS 1-3	0.17	0.04	-	0.13
8	KLTPS 4	0.02	0.01	-	0.01
9	Dhuvaran CCPP 1*	0.05	0.02		
10	Dhuvaran CCPP 2	0.05	0.02	-	0.03
11	Dhuvaran CCPP 3*	0.17	0.07		
12	Utran Extension*	0.14	0.07		
13	Ukai 6*	0.34	0.10	-	
14	Ukai Hydro	0.17	0.05	-	0.12
15	Kadana Hydro	0.15	0.04	-	0.11
Total		3.50	0.99	-	1.86

* PPA based Station

4.14. GAIN/ LOSS FROM WATER CHARGES

4.14.1. The Hon'ble Commission has considered the gains/losses arising from Water Charges as Uncontrollable in its previous year's true ups. Proposed sharing of gains/losses from Water Charges are as follows:

Table 35 : Gain/ (losses) from Water charges for FY 2018-19

Rs. Crores					
Sr. No.	Power Station	Water Charges (Approved)	Water Charges (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	0.10	-	-	0.10
2	Gandhinagar (3-4)	7.01	44.88	-	(37.87)
3	Gandhinagr 5*	11.87	29.55		
4	Wanakbori 1-6 TPS	35.76	56.57	-	(20.81)
5	Wanakbori 7*	8.18	11.26		
6	Sikka Extension (3-4)*	1.19	4.60		
7	KLTPS 1-3	0.43	0.27	-	0.16
8	KLTPS 4	0.13	0.10	-	0.03
9	Dhuvaran CCPP 1*	0.21	0.00		
10	Dhuvaran CCPP 2	0.76	-	-	0.76
11	Dhuvaran CCPP 3*	-	-		
12	Utran Extension*	3.64	2.20		
13	Ukai 6*	0.10	-	-	
14	Ukai Hydro	-	-	-	-
15	Kadana Hydro	-	-	-	-
Total		69.38	149.42	-	(57.62)

* PPA based Station



4.15. GAIN/ LOSS FROM TAXES

4.15.1. The Hon'ble Commission has considered the gains/losses arising from Taxes as Uncontrollable in its previous year true ups. Proposed sharing of gains/losses from Taxes are as follows:

Table 36 : Gain/ (losses) from Taxes for FY 2018-19

Sr. No.	Power Station	Tax (Approved)	Tax (Actual)	Rs. Crores	
				Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	3.47	2.68	-	0.79
2	Gandhinagar (3-4)	2.39	1.85	-	0.54
3	Gandhinagr 5*	1.19	0.92	-	0.27
4	Wanakbori 1-6 TPS	7.17	5.54	-	1.63
5	Wanakbori 7*	1.19	0.92	-	0.27
6	Sikka Extension (3-4)*	2.84	2.20	-	0.64
7	KLTPS 1-3	1.22	0.94	-	0.28
8	KLTPS 4	0.43	0.33	-	0.10
9	Dhuvaran CCPP 1*	0.61	0.47	-	0.14
10	Dhuvaran CCPP 2	0.64	0.49	-	0.15
11	Dhuvaran CCPP 3*	2.14	1.65	-	0.49
12	Utran Extension*	2.13	1.65	-	0.48
13	Ukai 6*	2.84	2.20	-	0.64
14	Ukai Hydro	1.73	1.34	-	0.39
15	Kadana Hydro	1.38	1.06	-	0.32
Total		31.37	24.24	-	7.13

* PPA based Station

4.15.2. GSECL during last year had paid an additional tax of Rs. 138.75 Crore pertaining to prior periods FY 2012-13 & 2013-14 as per the demand of the Commissioner of Income Tax. However, GSECL has challenged this demand for tax with the Income Tax Appellate Tribunal (ITAT). Accordingly, this additional tax will be claimed by GSECL based on the Judgment of the ITAT in the matter.

4.15.3. GSECL hereby requests the Hon'ble Commission to approve the tax expense for the FY 2018-19.

4.16. GAIN/ LOSS FROM NON-TARIFF INCOME

4.16.1. The Hon'ble Commission has considered the gains/losses arising from Non-tariff income as Uncontrollable in its previous year true ups. Proposed sharing of gains/losses from Non-tariff income is as mentioned below.



Table 37 : Gain/ (losses) from Non-tariff income for FY 2018-19

					Rs. Crores
Sr. No.	Power Station	Non-Tariff Income (Approved)	Non-Tariff Income (Actual)	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable Factor
1	Ukai (3-5)	15.87	26.39	-	10.52
2	Gandhinagar (3-4)	12.50	25.99	-	13.49
3	Gandhinagr 5*	11.93	13.59		
4	Wanakbori 1-6 TPS	46.29	40.42	-	(5.87)
5	Wanakbori 7*	6.75	7.59		
6	Sikka Extension (3-4)*	9.60	4.89		
7	KLTPS 1-3	4.84	3.44	-	(1.40)
8	KLTPS 4	1.65	-	-	(1.65)
9	Dhuvaran CCPP 1*	1.74	0.62		
10	Dhuvaran CCPP 2	1.81	0.62	-	(1.19)
11	Dhuvaran CCPP 3*	4.32	0.19		
12	Utran Extension*	5.69	0.96		
13	Ukai 6*	12.71	5.02	-	
14	Ukai Hydro	3.51	0.01	-	(3.50)
15	Kadana Hydro	3.06	0.47	-	(2.59)
Total		142.27	130.20	-	7.81

* PPA based Station

4.17. SHARING OF GAINS/ (LOSSES)

4.17.1. GERC MYT Regulations, 2016, specifies the Mechanism for treatment of Gains and Losses on account of Uncontrollable and Controllable expenses. The methodology approved by the Hon'ble Commission for sharing of such gains/ losses is as follows.

"23. Mechanism for pass through of gains or losses on account of uncontrollable factors"

"23.1 The approved aggregate gain or loss to the Generating Company or Transmission Licensee or SLDC or Distribution Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or Transmission Licensee or SLDC or Distribution Licensee over such period as may be specified in the Order of the Commission passed under these Regulations."

"23.2 The Generating Company or Transmission Licensee or SLDC or Distribution Licensee shall submit such details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the prescribed format to the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission."

23.3 Nothing contained in this Regulation 23 shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase, which shall be dealt with as specified by the Commission from time to time."



24 Mechanism for sharing of gains or losses on account of controllable factors:

24.1 The approved aggregate gain to the Generating Company or Transmission Licensee or SLDC or Distribution Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One-third of the amount of such gain shall be passed on as a rebate in tariffs over such period as may be stipulated in the Order of the Commission under Regulation 21.6;

(b) The balance amount, which will amount to two-thirds of such gain, may be utilised at the discretion of the Generating Company or Transmission Licensee or SLDC or Distribution Licensee.

24.2 The approved aggregate loss to the Generating Company or Transmission Licensee or SLDC or Distribution Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One-third of the amount of such loss may be passed on as an additional charge in tariffs over such period as may be stipulated in the Order of the Commission under Regulation 21.6; and

(b) The balance amount of loss, which will amount to two-thirds of such loss, shall be absorbed by the Generating Company or Transmission Licensee or SLDC or Distribution Licensee."

4.17.2. Based on above methodology, the Petitioner has determined plant wise Gains/ losses incurred by the GSECL due to variation in the value of the actual cost parameters in comparison with those approved by the Hon'ble Commission. The table below summarizes plant wise total gains / (losses) incurred by GSECL on account of various controllable and uncontrollable expenses.

4.17.3. **Controllable Gain/ (Losses) on account of Efficiency Parameters:** Due to the difference between the actual efficiency parameters and the approved efficiency parameters, GSECL has achieved gain/ (losses) of Rs. 46.98 Crores. Based on the mechanism specified as per MYT Regulations, gain of Rs. 15.66 Crores shall be passed on to the consumers.



Table 38 : Plant wise Controllable Gains/ Losses of GSECL for FY 2018-19

Sr. No.	Power Station	Gain/(Loss) due to Controllable Factors		Total Gains/ (Losses) due to Controllable factors	Total Gains/ (Losses) to be passed through (1/3rd of gains/ losses)
		O&M Expenses	Fuel Cost		
1	Ukai (3-5)	(37.67)	45.19	7.53	2.51
2	Gandhinagar (3-4)	(29.78)	17.01	(12.77)	(4.26)
3	Gandhinagr 5*	-	-	-	-
4	Wanakbori 1-6 TPS	24.74	87.56	112.30	37.43
5	Wanakbori 7*	-	-	-	-
6	Sikka Extension (3-4)*	-	-	-	-
7	KLTPS 1-3	(12.33)	(51.66)	(63.99)	(21.33)
8	KLTPS 4	6.01	(7.19)	(1.18)	(0.39)
9	Dhuvaran CCPP 1*	-	-	-	-
10	Dhuvaran CCPP 2	1.48	(11.40)	(9.92)	(3.31)
11	Dhuvaran CCPP 3*	-	-	-	-
12	Utran Extension*	-	-	-	-
13	Ukai 6*	-	-	-	-
14	Ukai Hydro	11.23	-	11.23	3.74
15	Kadana Hydro	3.77	-	3.77	1.26
Total		(32.53)	79.51	46.98	15.66

* PPA Governed Station

4.17.4. **Uncontrollable Gain/ (Losses):** GSECL has achieved gain/ (losses) of Rs. (29.94) Crores.



Table 39 : Plant wise Uncontrollable Gains/ Losses of GSECL for FY 2018-19

Sr. No	Power Station	Gain/(Loss) due to Uncontrollable Factors									Rs. Crores	
		O&M	Depreciation	Interest & Finance Charges	ROE	Interest on Working Capital	Water Charges	SLDC Charges	MAT	Non-Tariff Income	Total Gains/ (Losses) due to Uncontrollable factors	Total Gains/ (Losses) to be passed through
1	Ukai (3-5)	(11.73)	22.13	28.08	(2.64)	(9.07)	0.10	0.49	0.79	10.52	38.67	38.67
2	Gandhinagar (3-4)	(13.85)	25.86	6.67	(4.51)	(7.15)	(37.87)	0.39	0.54	13.49	(16.43)	(16.43)
3	Gandhinagar 5*	(6.92)	-	-	-	-	-	-	0.27	-	(6.66)	(6.66)
4	Wanakbori 1-6 TPS	(20.62)	27.94	(2.91)	(0.76)	(20.90)	(20.81)	0.59	1.63	(5.87)	(41.71)	(41.71)
5	Wanakbori 7*	(3.44)	-	-	-	-	-	-	0.27	-	(3.17)	(3.17)
6	Sikka TPS	-	-	-	-	-	-	-	-	-	-	-
7	Sikka Extension (3-4)*	(8.74)	-	-	-	-	-	-	0.64	-	(8.09)	(8.09)
8	KLTPS 1-3	(5.13)	33.98	(1.75)	(2.34)	(1.65)	0.16	0.13	0.28	(1.40)	22.28	22.28
9	KLTPS 4	(1.79)	0.30	2.77	0.14	(0.56)	0.03	0.01	0.10	(1.65)	(0.65)	(0.65)
10	Dhuvaran CCPP 1*	(3.04)	-	-	-	-	-	-	0.14	-	(2.90)	(2.90)
11	Dhuvaran CCPP 2	(3.04)	(0.31)	3.44	1.68	(0.07)	0.76	0.03	0.15	(1.19)	1.45	1.45
12	Dhuvaran CCPP 3*	-	-	-	-	-	-	-	0.49	-	0.49	0.49
13	Utran Extension*	(4.05)	-	-	-	-	-	-	0.48	-	(3.57)	(3.57)
14	Ukai 6*	(9.61)	-	-	-	-	-	-	0.64	-	(8.97)	(8.97)
15	Ukai Hydro	(1.63)	(2.24)	0.40	(0.14)	0.05	-	0.12	0.39	(3.50)	(6.56)	(6.56)
16	Kadana Hydro	(2.46)	10.39	-	0.02	0.09	-	0.11	0.32	(2.59)	5.87	5.87
Total		(96.04)	118.06	36.71	(8.56)	(39.27)	(57.62)	1.86	7.13	7.81	(29.94)	(29.94)

* PPA Governed Station



4.18. NET ENTITLEMENT FOR FY 2018-19

4.18.1. Based on the above estimated gains / (losses) on account of controllable and uncontrollable factors, the Gap/ Surplus of GSECL for FY 2018-19 has been worked out as given below:

Table 40: Net entitlement for FY 2018-19

Rs. Crores				
Sr. No.	Power Station	Gain/(Losses) due to controllable factor	Gain/(Losses) due to uncontrollable factor	Total Gain/(losses) to be passed through
a	B	c	d	e = c/3 + d
1	Ukai (3-5)	7.53	38.67	41.18
2	Gandhinagar (3-4)	(12.77)	(16.43)	(20.69)
3	Gandhinagr 5*	-	(6.66)	(6.66)
4	Wanakbori 1-6 TPS	112.30	(41.71)	(4.28)
5	Wanakbori 7*	-	(3.17)	(3.17)
6	Sikka TPS	-	-	-
7	Sikka Extension (3-4)*	-	(8.09)	(8.09)
8	KLTPS 1-3	(63.99)	22.28	0.95
9	KLTPS 4	(1.18)	(0.65)	(1.04)
10	Dhuvaran CCPP 1*	-	(2.90)	(2.90)
11	Dhuvaran CCPP 2	(9.92)	1.45	(1.85)
12	Dhuvaran CCPP 3*	-	0.49	0.49
13	Utran Extension*	-	(3.57)	(3.57)
14	Ukai 6*	-	(8.97)	(8.97)
15	Ukai Hydro	11.23	(6.56)	(2.81)
16	Kadana Hydro	3.77	5.87	7.13
Total		46.98	(29.94)	(14.28)

* PPA governed Station

4.18.2. GSECL proposes to pass on total entitlement of the fixed cost to the next Financial Year. GSECL requests the Hon'ble Commission to allow plant wise gap/(surplus) to be passed on to the fixed charges in the FY 2020-21 for passing on the gain/(loss) to the beneficiaries.

SECTION 5. UNABSORBED DEPRECIATION FOR SIKKA UNITS 1&2

5.1.1. GSECL submits that the Units 1 and 2 of Sikka TPS have been decommissioned on 1 April, 2017. The accumulated depreciation charged by GSECL as on 1 April, 2017 stands at Rs. 424.18 Crore. The salvage value of the plant has been assessed at 10% of capital cost in line with the MYT Regulations. Based on above, there is a depreciation amounting to Rs. 206.80 Crore that has not been charged/claimed by GSECL as shown in Table below:

Table 41 : Remaining Depreciation of Sikka 1 - 2

Particular	Opening Balance of Gross Fixed Assets as on 1-04-2017	Opening Balance of Accumulated Depreciation as on 1-04-2017	Net Block	10% GB	Rs. Crores
					Remaining Depreciation to be charged
FA Ex Spares	460.76	328.92	131.84	46.08	85.77
Spares	216.29	95.26	121.03	-	121.03
Total	677.05	424.18	252.88	46.08	206.80

5.1.2. GSECL further like to submit that it has now completed the sale process of the assets pertaining to Sikka Units 1 and 2 and has received an amount of Rs. 82.76 Crore as total sales proceeds. Further, as mentioned above the salvage/residual value of Sikka 1 & 2 has been assessed at Rs. 46.08 Crore. Hence, there is an excess recovery or profit amounting to Rs. 36.68 Crore (i.e., Rs. 82.76 Cr– Rs. 46.08 Cr) on account of sales proceed. GSECL has adjusted this excess recovery from the remaining depreciation to be charged and accordingly, has claimed an unabsorbed depreciation of Rs. 170.12 Crore.

Table 42: Unabsorbed depreciation for GTPS units 1 and 2

Particulars	Legend	Amount (Rs. Crore)
Remaining Depreciation to be charged	A	206.80
Total sale proceeds	B	82.76
Salvage value	C	46.08
Excess Recovery (Profit)	D = B - C	36.68
Net Unabsorbed Depreciation to be claimed in FY 2020-21	E = A - D	170.12

5.1.3. GSECL requests the Hon'ble Commission to approve the above unabsorbed depreciation for Sikka Units 1 and 2 and allow recovery of the same in FY 2020-21.



SECTION 6. TARIFF DETERMINATION OF BHAVNAGAR LIGNITE THERMAL POWER STATION (BLTPS) UNITS 1&2 FOR FY 2020-21

6.1. BACKGROUND

6.1.1. Bhavnagar Energy Company Ltd. (BECL) vide the GoG notification dated 27 August, 2018 is merged with GSECL. Accordingly, the Assets and Liabilities is transferred to GSECL. The effective date of transfer is 1 April, 2018 as per the notification. The date of commissioning for Unit 1 is 16 May, 2016 and Unit 2 is 27 March, 2017. The Hon'ble Commission in its Tariff Order dated 24 April, 2019 in Case No. 1756 of 2018 in line with the Regulation 46.2 (a) of the GERC (MYT) Regulations, 2016 has approved the provisional tariff for Bhavnagar Lignite Thermal Power station (BLTPS) (erstwhile BECL) for FY 2019-20. GSECL in present petition has computed the fixed cost and variable charges for Bhavnagar Lignite Thermal Power station (BLTPS) for FY 2020-21 based on the PPA for BLTPS between GUVNL and GSECL approved by the Hon'ble Commission. The working of the fixed cost and variable cost components is elaborated below.

6.2. FIXED COST FOR FY 2020-21

6.2.1. As outlined under the Regulations, the fixed cost has been categorized under the following heads:

- Depreciation
- Interest and Finance Charges
- Return on Equity
- Operation and Maintenance Expenses
- Interest on Working Capital
- Water Charges
- SLDC Charges
- Tax
- Non-Tariff Income

Table 43: Fixed Cost for BLTPS (1-2) for FY 2020-21

Description	(Rs. Crores)
	2020-21
Depreciation	190.87
Interest on Loan	142.08
Return on Equity	151.83
Interest on Working Capital	33.00
O&M Cost	168.60
SLDC Charges	0.24
Income Tax	32.72
Total	719.34

6.2.2. The working of the individual fixed cost components is provided below:

6.2.3. **Depreciation:** GSECL has considered opening GFA of FY 2020-21 as closing GFA of FY 2019-20 as approved by the Hon'ble Commission in its previous Order. The rate



of Depreciation has been considered as 5.28% in line with the GERC MYT Regulations. Accordingly, the depreciation on the PPA approved GFA has been worked out as Rs. 190.87 Crore as shown in Table below.

Table 44: Depreciation for FY 2020-21

Particulars	(Rs. Crores)
	2020-21
GFA in Beginning of Year	3,615.00
Capital Addition	-
Deduction	-
Closing GFA	3,615.00
Average GFA	3,615.00
Rate of Depreciation	5.28%
Depreciation	190.87

- 6.2.4. **Interest Charges:** The normative opening loan based on 70:30 debt:equity ratio for FY 2020-21 is considered as closing loan of FY 2019-20 as approved by the Hon'ble Commission in its previous Order. The depreciation as computed above is considered as repayment of loan for FY 2020-21 in line with GERC MYT Regulations, 2016 . The interest rate of 8.50% is considered for computing interest expenses as under:

Table 45: Interest expenses for FY 2020-21

Particulars	(Rs. Crores)
	2020-21
Opening Loans	1,767.01
Loan Additions during the Year	-
Repayment during the Year	190.87
Closing Loans	1,576.14
Average Loans	1,671.57
Wt Avg Rate of Interest on Loan	8.50%
Interest on Loan	142.08
Total Interest & Financial Charges	142.08

- 6.2.5. **Return on Equity:** The return on equity is computed at a normative debt-equity ratio of 70-30 and applying rate of 14% as under:

Table 46: Return on Equity for FY 2020-21

Particulars	(Rs. Crores)
	2020-21
Opening Equity	1084.50
Additions during the year	0.00
Closing Equity	1084.50
Average Equity	1084.50
Rate of Return on Equity	14%
Return on Equity	151.83



- 6.2.6. **Interest on Working Capital:** The interest on working capital is computed based on the norms specified in the MYT Regulations, 2016 and considering the interest rate of 10.89% which is the 1-year SBI MCLR as on 1 April, 2019 i.e. 8.39% plus 250 basis points. This rate is computed as per the First Amendment to the MYT Regulations, 2016 dated 2nd December, 2016. The interest on working capital is computed as follows:

Table 47: Interest on working capital for FY 2020-21

Particulars	(Rs. Crores)
	2020-21
Lignite Cost (1 1/2 months)	113.15
Sec Fuel Cost (2 Months)	2.85
O&M Expenses (1 Month)	14.05
Maintenance Spares	36.15
Receivable (1 Months)	136.80
Total Working Capital	303.00
Rate of Interest	10.89%
Interest on Working Capital	33.00

- 6.2.7. **O&M Expenses:** O&M expenses are computed as per the norms specified for new lignite-based stations in the Regulation 55 (b) of GERC MYT Regulations, 2016:

Table 48: O&M expenses for FY 2020-21

Particulars	(Rs. Crores)
	2020-21
O & M cost	168.60

- 6.2.8. **SLDC Fees and Charges:** SLDC fees and charges are computed as follows:

Table 49: SLDC Fees and Charges for FY 2020-21

Particulars	(Rs. Crores)
	2020-21
SLDC Fees & Charges	0.24

- 6.2.9. **Income Tax:** Income tax is computed by applying the MAT rate of 21.5488% on the Return on Equity as follows:

Table 50: Income Tax for FY 2020-21

Particulars	(Rs. Crores)
	2020-21
Income Tax	32.72

6.3. ENERGY CHARGES FOR FY 2020-21

- 6.3.1. Based on operating & fuel related parameters considered in the PPA approved by the Hon'ble Commission, table below indicates energy charges for FY 2020-21:



Table 51: Energy Charges for FY 2020-21

Particulars	Units	2020-21
Gross Generation	MUs	3,504
Auxiliary Consumption	MUs	385
Net Generation	MUs	3,119
Capacity	MW	500
Availability Factor	%	80.00%
Plant Load Factor	%	80.00%
Auxiliary Consumption	%	11.00%
Station Heat Rate	kcal/kWh	2,623
Sp. Oil Consumption	ml/kWh	1.00
Sp. Consumption of Limestone	Kg/KWh	0.26
Gross Calorific Value of Lignite	kcal/kg	2,900
Calorific Value of Oil	kcal/l	10,283
Overall Heat	G Cal	91,90,992
Heat from Oil	G Cal	36,032
Heat from Lignite	G Cal	91,54,960
Transit losses Lignite	%	0.80%
Actual Lime Consumption	MT	9,11,040
Actual Oil Consumption	kl	3,504
Actual Lignite Consumption	MT	31,56,883
A) Indigenous Lignite	MT	31,82,342
Specific Lignite Consumption	kg/kWh	0.90
Price of Lignite*	Rs/MT	2,513
Price of Oil**	Rs/kl	48,839
Price of Lime**	Rs/MT	1,158
Lignite Cost	Rs Crores	799.72
Oil Cost	Rs Crores	17.11
Lime Cost	Rs Crores	105.46
Total Fuel Cost	Rs Crores	922.30
Fuel Cost/ Gross Generation	Rs/kWh	2.632
Fuel Cost/ Net Generation	Rs/kWh	2.957

Note: * Price of Lignite has been considered as per draft FSA between BLTPS and GPCL

** Price of Secondary fuel has been considered as actual weighted average cost of last three preceding months.

6.3.2. Based on the above, GSECL requests the Hon'ble Commission to approve the tariff for BLTPS Units 1 and 2 for FY 2020-21.



SECTION 7. DETERMINATION OF TARIFF FOR FY 2020-21

7.1. TARIFF FOR FY 2020-21

7.1.1. Based on the Truing up for FY 2018-19 as discussed in the earlier sections, the Fixed cost for FY 2020-21 are as tabulated below. Further, GSECL has considered the Variable Charge for FY 2020-21 based on Approved Variable Charges for FY 2020-21 in the MYT Order dated 31st March, 2017.

7.1.2. The Fixed and Variable cost of GSECL's Generating Plants for FY 2020-21 are estimated as under:

Table 52 : Approved Fixed Cost of GSECL plants for FY 2020-21

												Rs. Crores
Sr. No.	Power Station	Depreciation	Interest & Finance Charges	Return on Equity	Interest on Working Capital	O&M Expenses	Water Charges	Tax	SLDC Fees & Charges	Total Fixed Cost	Less: Non-Tariff Income	Net Fixed Charges
1	Ukai (3-5)	80.83	36.94	32.86	30.30	184.09	0.10	3.47	0.60	369.19	11.39	357.81
2	Gandhinagar (3-4)	56.27	0.08	17.67	22.52	102.39	7.01	2.39	0.50	208.83	12.50	196.33
3	Gandhinagr 5*	-	-	30.88	14.70	26.09	11.87	1.19	0.05	84.78	11.93	72.86
4	Wanakbori 1-6 TPS	127.36	18.12	95.65	66.99	267.91	35.76	7.17	0.81	619.77	46.29	573.49
5	Wanakbori 7*	-	-	28.03	11.49	21.65	8.18	1.19	0.05	70.59	6.75	63.85
6	Sikka Extension (3-4)	172.90	144.66	137.53	29.20	112.90	1.19	2.84	0.23	601.45	9.60	591.84
7	KLTPS 1-3	66.80	0.01	49.27	8.94	128.32	0.43	1.22	0.17	255.16	4.84	250.32
8	KLTPS 4	36.44	9.13	29.53	3.35	21.98	0.13	0.43	0.02	101.01	1.65	99.38
9	Dhuvaran CCPP 1*	21.24	-	11.07	5.27	37.39	0.21	0.61	0.05	75.84	1.74	74.10
10	Dhuvaran CCPP 2	24.92	8.11	18.49	6.00	37.48	0.76	0.64	0.05	96.45	1.81	94.65
11	Dhuvaran CCPP 3*	76.43	64.37	65.36	13.11	77.85	-	2.14	0.17	299.43	4.32	295.11
12	Utran Extension*	66.54	31.25	57.60	19.18	62.03	3.64	2.13	0.14	242.51	5.69	236.81
13	Ukai 6*	141.13	98.59	122.46	29.88	112.90	0.10	2.84	0.34	508.24	12.71	495.54



Sr. No.	Power Station	Depreciation	Interest & Finance Charges	Return on Equity	Interest on Working Capital	O&M Expenses	Water Charges	Tax	SLDC Fees & Charges	Total Fixed Cost	Less: Non-Tariff Income	Net Fixed Charges
14	Ukai Hydro	-	2.53	10.42	0.76	22.59	-	1.73	0.17	38.20	3.51	34.69
15	Kadana Hydro	15.90	-	28.84	1.35	27.20	-	1.38	0.15	74.82	3.06	71.76
16	Wanakbori 8 TPS*	235.75	252.40	187.53	55.51	153.54	-	-	-	884.73	-	884.72
Total		1,122.50	666.20	923.20	318.54	1,396.32	69.39	31.37	3.50	4,531.02	137.78	4,393.24

*PPA based stations

Note: GSECL has excluded Dhuvaran STPS* from above MYT approved Table as the Govt. of Gujarat has decided not to have any new thermal power plants to encourage clean environment and clean energy in the State.



Table 53 : Proposed revised Fixed Cost of GSECL plants for FY 2020-21

Sr. No.	Power Station	Fixed Charges for FY 2020-21	Total Gain/(losses) to be passed through	Rs. Crores
				Net Fixed Charges for FY 2020-21
1	Ukai (3-5)	357.81	41.18	316.63
2	Gandhinagar (3-4)	196.33	(20.69)	217.02
3	Gandhinagr 5*	72.86	(6.66)	79.52
4	Wanakbori 1-6 TPS	573.49	(4.28)	577.77
5	Wanakbori 7*	63.85	(3.17)	67.02
6	KLTPS 1-3	250.32	0.95	249.37
7	KLTPS 4	99.38	(1.04)	100.42
8	Dhuvaran CCPP 1*	74.10	(2.90)	77.00
9	Dhuvaran CCPP 2	94.65	(1.85)	96.50
10	Utran Extension*	236.81	(3.57)	240.38
11	Ukai Hydro	34.69	(2.81)	37.50
12	Kadana Hydro	71.76	7.13	64.63
13	Ukai 6*	495.54	(8.97)	504.51
14	Dhuvaran CCPP 3*	295.11	0.49	294.62
15	Sikka 3&4*	591.84	(8.09)	599.93
16	Wanakbori 8 TPS*	884.72	-	884.72
Total		4,393.24	(14.28)	4,407.54

*PPA based stations

Table 54 : Approved Energy Charges of GSECL plants for FY 2020-21

Sr. No.	Power Station	2020-21 (Rs/kWh)
1	Ukai (3-5)	2.768
2	Gandhinagar (3-4)	3.308
3	Gandhinagr 5*	3.912
4	Wanakbori 1-6 TPS	3.238
5	Wanakbori 7*	3.093
6	Sikka Extension (3-4)*	2.425
7	KLTPS 1-3	1.496
8	KLTPS 4	1.469
9	Dhuvaran CCPP 1*	3.899
10	Dhuvaran CCPP 2	4.066
11	Dhuvaran CCPP 3*	2.256
12	Utran Extension*	4.345
13	Ukai 6*	2.516
14	Wanakbori 8*	2.941

*PPA based stations

7.1.3. GSECL requests Hon'ble Commission to approve revised Fixed Costs for FY 2020-21 as mentioned above.

7.1.4. GSECL requests Hon'ble Commission to approve the unabsorbed depreciation of Sikka Units 1 and 2 and allow recovery of the same in FY 2020-21. GSECL requests the Hon'ble Commission to approve the fixed charges and determine the tariff for BLTPS Units 1 and 2 for FY 2020-21.

**SECTION 8. COMPLIANCE OF DIRECTIVES****DIRECTIVES AND THEIR COMPLIANCE BY GSECL:**

DIRECTIVE	COMPLIANCE TO THE DIRECTIVE
8.1 <u>Compliance of Directives issued by the Commission</u>	
8.2 Earlier Directives	
<u>Directive 1: Renovation and Modernization (R&M) of Thermal Plant</u> GSECL may submit its further plan for R&M of Ukai Unit 1 & 2. Further, GSECL may also submit a quarterly progress report of the R&M activities being undertaken for Wanakbori 1-6. Compliance as per current petition: <ul style="list-style-type: none">• R&M work of Ukai Unit No.1 & 2 completed on 24.02.2010.• C & I up-gradation work of Wanakbori TPS Unit No.6 is completed on 17.05.2015. So Unit No.2, 3, 4, 5 & 6 are completed. Work of Unit No: 1 will be started as per the program of SLDC for Shut Down. <u>Compliance:</u> C & I Up Gradation work of Wanakbori TPS Unit No. 1 is completed on 11.03.2017. Work of Unit No. 1 was carried out during shutdown period from 01.12.2016 to 11.03.2017. <u>Commission Comments:</u> The Progress of the work of Wanakbori Unit No. 1 may be submitted by GSECL Further Compliance the C & I upgradation (R&M) work of WTPS-1 is planned during November 2016-March 2017. GSECL shall submit the completion report of R&M works of WTPS-1.	<u>COMPLIANCE:</u> Report of R & M work of WTPS-1 Will be submitted at the earliest.
<u>Directive 2: Preparedness to face competition</u> GSECL may submit its preparedness for facing competition indicating the action taken / proposed to be taken to bring down the overall cost of generation. <u>Compliance:</u> To improve efficiency and bring down the Generation Cost of old machine and to compete with private generators, GSECL has initiated certain proven technological advancement works, which are submitted at Annexure I of the petition. Also, GSECL has planned to enhance capacity building by installing Super Critical Machines having modern technology and high-performance	<u>COMPLAINCE:</u> Noted by Hon'ble Commission.



<p>parameters which may also help GSECL to compete with private generators. It is also submitted vide Annexure I of the petition.</p> <p><u>Commission Comments:</u> The progress on the above works may be submitted by GSECL at quarterly intervals. The Annexure I, as submitted by GSECL is noted by the Commission.</p> <p><u>Further Compliance:</u> Work progress is submitted as Annexure I of the petition.</p> <p><u>Commission's comments:</u> The Commission has noted the submission.</p>	
<p><u>Directive 3: Inefficiency of Sikka Unit 1 & 2</u> GSECL is directed to examine the inefficiency, if any, of Sikka power station and intimate the Commission of the action taken in this regard within a period of 3 months.</p> <p><u>Compliance:</u> Efficiency of Sikka TPS is improving gradually after completion of de-silting. As such there is no inefficiency noticed.</p> <p><u>Commission Comments:</u> The action taken by GSECL is noted. The Auxiliary consumption, which is 11.71%, against 11.00% approved for FY 2014-15, needs to be brought down further.</p> <p><u>Further Compliance:</u> The percentage of Backing Down and RSD is 68.44% during FY 2015-16. During RSD period minimum Auxiliaries are required to be run to keep the Units available for Generation as per requirement of SLDC. This adds to Percentage of Auxiliary Consumption. If Generation is increased, then Auxiliary Consumption may go down.</p> <p><u>Commission Comments:</u> The Commission has noted the submission. The Commission has also noted that Sikka 1 & 2 plants are decommissioned in FY 2017-18.</p>	<p><u>COMPLAINCE:</u> Noted by Hon'ble Commission.</p>
<p><u>Directive 4: Actual Performance Parameters</u> GSECL shall submit month wise, at quarterly intervals, the actual performance parameters like PAF, PLF, SHR, Aux. Consumption, SFC, Transit loss etc. actual gross generation, actual net generation and coal stock position (both imported and indigenous) for each station to the Commission and place the said information on its website.</p> <p><u>Compliance:</u> Performance Parameter and Coal stock Position month wise at quarterly intervals are attached as</p>	<p><u>COMPLAINCE:</u> Performance Parameter and Coal stock Position month wise at quarterly intervals are attached as ANNEXURE-I and ANNEXURE-II. [For 1st to 4th Qtr of FY 2018-19] AND [For 1st Qtr of FY 2019-20]</p>



<p>Annexure II and Annexure III of the petition.</p> <p><u>Commission Comments:</u> The Commission has noted the submission. GSECL shall continue to submit the report as per directive.</p>	
<p><u>Directive 5: Calculation of Depreciation</u> The Commission directs the Petitioner to calculate depreciation for true-up from FY 2017-18 as per Regulation 39 of the GERC (MYT) Regulations, 2016.</p> <p><u>Compliance:</u> As Directed by the Commission, GSECL is Calculating depreciation from FY 2017-18 as per Regulation 39 of the GERC (MYT) Regulations, 2016.</p> <p><u>Commission Comments:</u> The Commission has observed that the calculation for depreciation done by GSECL is as directed and as per the Commission's said Regulations.</p>	<p><u>COMPLAINCE:</u> The Commission has observed and commented that the same is done by GSECL is as directed and as per the Commission's said Regulations.</p>
<p><u>Directive 6: Deviation of Capital Expenditure</u> GSECL is directed to submit a prior intimation to the Commission with proper justification for any variation of more than 10% between approved and actual CAPEX.</p> <p><u>Compliance:</u> As Directed, if there is any deviation in Capital Expenditure, GSECL will intimate to the Commission.</p> <p><u>Commission Comments:</u> The Commission has noted the compliance and further direct that any investment / proposal / modification to be carried out for meeting the environmental guidelines of Gol shall be put up for approval of the Commission</p>	<p><u>COMPLAINCE:</u> GSECL will put up the CAPEX proposal to the Hon'ble Commission for modification to mitigate the environment norms as per guideline issued by Gol.</p>
<p><u>Directive 7: Lignite Cost of KLTPS</u> It is observed by the Commission that in FY 2016-17 lignite price for KLTPS has exorbitantly increased. GSECL shall take up the matter with appropriate authority to procure the lignite at a rate which is at par or lesser than the equally placed lignite thermal power station in the state.</p> <p><u>Compliance:</u> As GMDC Panandhro mine was exhausted, GMDC started supplying lignite to KLTPS from Mata no Madh mine from 1st August, 2016. The basic price of lignite from Mata no Madh mine was higher. As per guideline issued by Industries and Mine Department GoG dated 15th February, 2012, pricing of lignite is decided by formula "Cost + 15% or Market Price – 25% discount whichever is lower". GSECL vide letter dated 10th August, 2016</p>	<p><u>COMPLAINCE:</u> Noted by Hon'ble Commission.</p>



<p>requested GMDC to furnish the detail calculation for the pricing. GUVNL was also asked for their concurrence. On receipt of detail calculations from GMDC and after auditing, GUVNL vide letter dated 22nd September, 2016 approved the basic rate @ Rs. 854/MT and other charges as applicable.</p> <p>Prior to 1st July, 2017 (implementation of GST), Excise duty @ 6% and Clean energy Cess @ Rs. 400/MT was charged on assessable value and over and above 22.5% (20+2.5) VAT was levied. So, the end cost of lignite was Rs. 1915.28/MT considering the basic price of lignite as Rs. 854/MT. After implementation of GST w.e.f. 1st July, 2017, excise duty @ 6% was abolished, GST Compensation Cess @ Rs. 400/MT was introduced in place of Clean energy Cess and GST @ 5% charged on assessable value before GST Compensation Cess. Hence, the end cost of lignite got revised to Rs. 1552.52/MT considering the same basic price of lignite instead of Rs. 1915.26 / MT. Hence, lignite price is reduced by Rs. 362.76 / MT.</p> <p><u>Commission Comments:</u> The Commission has noted the submission.</p>	
<p><u>Directive 8: Procurement of coal from Western Coal Fields</u></p> <p>GSECL should take up the matter with appropriate authority to maximize coal procurement from Western Coal Fields, to reduce the fuel cost by saving on freight charges.</p> <p><u>Compliance:</u> Ministry of Power and Ministry of Coal have approved rationalization of coal linkage of 12 Lakh MT (5 LMT-GTPS + 7 LMT-WTPS) from SECL to WCL for GSECL Power Stations. WCL was insisting for 50% coal on notified price and 50% on cost plus basis. However, in the month of November-2016, WCL agreed to supply coal on Notified price and signed MoU to supply coal at notified price to GSECL.</p> <p>Further, Coal India has approved supply of 30 Lakh MT from WCL for GSECL power Stations in addition to 12 Lakh MT coal on 28.04.2017 to reduce the cost of power to the consumer of State. Therefore, additional 42 Lakh MT coal would be available from WCL in place of SECL.</p> <p>MoU agreement signed between GSECL and WCL on 05.05.17 for supply of coal under Rationalization.</p> <p><u>Commission Comments:</u> The Commission has noted the submission</p>	<p><u>COMPLAINCE:</u></p> <p>Noted by Hon'ble Commission.</p>



<p><u>Directive 9: Green Cess on Coal Cost</u></p> <p>GSECL is advised to take up the matter with appropriate authority to rationalize the Green Cess imposed on procurement of coal for charging the Green Cess in the ratio of RPO fulfilment by the state/entity.</p> <p>It is also observed by the Commission that Green Cess is imposed by the Government of India uniformly across the coal quality. GSECL is advised to take up the matter with appropriate authority to get the necessary amendment to reduce the overall cost of fuel.</p> <p><u>Compliance:</u></p> <p>Clean Energy Cess which was being collected under Central Excise regime is now abolished w.e.f. 1st July, 2017 after the introduction of Goods and Service Tax. Now, GST Compensation Cess @ Rs. 400/MT is being levied on coal w.e.f. 1st July, 2017. The concept of Compensation Cess is now completely different from Clean Energy Cess. It is levied to compensate the revenue loss occurred to the States because of implementation of GST Act, 2017. As GST revenue will flow to the State where the coal is consumed, the Coal producing States will have revenue loss and to compensate the same Compensation Cess is levied. As per Goods and Services Tax (Compensation to States) Act, 2017, Compensation Cess would be charged for a period of 5 years only from the date of its implementation.</p> <p>Thus, the Clean Energy Cess has already been abolished w.e.f. 1st July, 2017 and Compensation Cess has been levied with totally different purpose. Hence, the matter of Green Cess cannot be referred to Central Government.</p> <p><u>Commission Comments:</u></p> <p>The Commission has noted the submission</p>	<p><u>COMPLAINCE:</u></p> <p>Noted by Hon'ble Commission.</p>
<p><u>Directive 10: Fuel Supply Arrangements</u></p> <p>GSECL is directed to initiate efforts for optimizing fuel supply arrangements and submit the detailed report related to existing FSA with details related to take or pay liabilities, practice for procuring imported fuel, and present arrangement and action required for optimization of fuel supply arrangement by 30th June, 2017.</p> <p><u>Compliance:</u></p> <p>GSECL has initiated the actions for optimization of coal cost and transferred the domestic coal to the own cheaper power Generating station to reduce the cost of Generation as a part of implementation</p>	<p><u>COMPLAINCE:</u></p> <p>Noted by Hon'ble Commission. Further hard copy of Long-Term Supply Agreement for imported coal between GSECL and APIL is attached here with as ANNEXURE-III</p>



<p>of flexibility as per guideline issued by CEA and Ministry of power.</p> <p>Further, GSECL has signed the supplementary agreement on 13th April, 2017 for implementation of Flexibility in Utilization of Domestic Coal with SECL and WCL. So that the coal ACQ shall be considered company as a whole instead of power station wise. So, coal penalty/incentive shall be calculated GSECL as a whole instead of power station wise.</p> <p>For supply of imported coal, GSECL has Long Term Supply Agreement with M/s APIL.</p> <p><u>Commission Comments:</u> The Commission has noted the submission. However, it is directed to submit the copy of Long-Term Supply Agreement for imported coal between GSECL and APIL.</p>																
<p>8.3 Directives issued vide Order dated 31st March, 2018</p>																
<p><u>Directive 1: Scrapping of Old Units</u> GSECL is directed to expedite the disposal of decommissioned generating units.</p> <p><u>Compliance:</u> The status of disposal of decommissioned generating units (as on 31st July, 2018) is as under:</p>	<p><u>COMPLIANCE:</u> Noted by Hon'ble Commission.</p>															
<table border="1"> <thead> <tr> <th data-bbox="185 1357 284 1438">Sr. No.</th> <th data-bbox="284 1357 527 1438">Unit</th> <th data-bbox="527 1357 1534 1438">Present Disposal Status</th> </tr> </thead> <tbody> <tr> <td data-bbox="185 1438 284 1559">1</td> <td data-bbox="284 1438 527 1559">GTPS 1 & 2 (2 x 120 MW)</td> <td data-bbox="527 1438 1534 1559">The sale order is awarded to M/s. Ghansiram Gokalchand, Ship Breaking Yard, Bhavnagar on 8th January, 2018. Approx. 35% work of dismantling is completed till date.</td> </tr> <tr> <td data-bbox="185 1559 284 1639">2</td> <td data-bbox="284 1559 527 1639">STPS 1 & 2 (2 x 120 MW)</td> <td data-bbox="527 1559 1534 1639">The e-Auction is completed on 6th June, 2018 and the issuance of sale order is under approval of board of Directors of GSECL.</td> </tr> <tr> <td data-bbox="185 1639 284 1720">3</td> <td data-bbox="284 1639 527 1720">Utran CCPP - 1 (1 x 135 MW)</td> <td data-bbox="527 1639 1534 1720">e-Auction is under progress.</td> </tr> <tr> <td data-bbox="185 1720 284 1800">4</td> <td data-bbox="284 1720 527 1800">UTPS 1 & 2 (2 x 120 MW)</td> <td data-bbox="527 1720 1534 1800">Valuation is under progress.</td> </tr> </tbody> </table>	Sr. No.	Unit	Present Disposal Status	1	GTPS 1 & 2 (2 x 120 MW)	The sale order is awarded to M/s. Ghansiram Gokalchand, Ship Breaking Yard, Bhavnagar on 8th January, 2018. Approx. 35% work of dismantling is completed till date.	2	STPS 1 & 2 (2 x 120 MW)	The e-Auction is completed on 6th June, 2018 and the issuance of sale order is under approval of board of Directors of GSECL.	3	Utran CCPP - 1 (1 x 135 MW)	e-Auction is under progress.	4	UTPS 1 & 2 (2 x 120 MW)	Valuation is under progress.	
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3	Utran CCPP - 1 (1 x 135 MW)	e-Auction is under progress.														
4	UTPS 1 & 2 (2 x 120 MW)	Valuation is under progress.														
<p><u>Commission Comments:</u> The Commission has noted the submission.</p>																
<p><u>Directive 2: Tying up gas supply</u> GSECL should explore the possibility of tying up gas supply with overseas suppliers at competitive price through global tenders by following prudent practice; as per rules and regulations.</p> <p><u>Compliance:</u> As approved by GUVNL vide letter dated 14th March, 2018, GSECL has imported 1 no. of part cargo of LNG having quantity of 37.5 MMSCM during the period from 23.03.2018 to 30.04.2018.</p> <p><u>Commission Comments:</u> The Commission has noted the submission.</p>	<p><u>COMPLIANCE:</u> Noted by Hon'ble Commission.</p>															



8.4 Fresh Directives	
<p><u>Directive 1: Life Assessment & fulfilling Environment Norms of GSECL Plants</u></p> <p>GSECL is directed to carry out detailed technical study on the aging of its different units at various stations for life assessment and requirement of any Renovation & Modernization with techno-commercial assessment keeping new environmental norms of MoEF for Thermal Power Plants. GSECL shall submit a comprehensive report at the earliest.</p>	<p><u>COMPLIANCE:</u></p> <p>LoI is issued to M/s Datang Technologies & Engineering for Implementation FGD in 800 MW at the total price of Rs. 377 Cr. With scheduled commissioning in Aug 2021.</p>
<p><u>Directive 2: Separate Accounts for RE Assets</u></p> <p>GSECL is directed to submit separate accounting statement for RE assets at its various locations during the submission of yearly true-up petition.</p>	<p><u>COMPLIANCE:</u></p> <p>Separate accounting formats for RE assets at various locations has been attached as Annexure - IV.</p>
<p><u>Directive 3: Study for Technical Minimum Operations of plants at 55% of MCR</u></p> <p>To achieve the National RE capacity addition target of 175 GW by the year 2022, the existing coal based base load capacity has to be used as balancing power and anticipated to be more and more cycled with increase in variable RE generation in the State Grid. To absorb the highly intermittent and variable generation from RE sources, more flexible and cyclic operations with fast Ramp Up and Ramp Down from base load plants is need of the time. In order to meet this, GSECL is directed to submit a comprehensive report covering the present status of Technical minimum level operation of each thermal plant with Ramp Up and Ramp Down capability and action plan for implementing 55% Technical minimum criteria for all such efficient plants. The report may include cost of implementation including timeline and impact on machine's life and efficiency. This report should be submitted within 3 months to the Commission.</p>	<p><u>COMPLIANCE:</u></p> <p>One 200/210 MW (Ukai TPS Unit no 4) & one 500 MW Unit (Ukai TPS Unit no 6) of GSECL are identified as the pilot coal flexing projects with USAID, to study & identify the capability of units for low load operation. The study will identify the ramping capability, safe technical minimum load for sustained operation, retrofit/modifications required to achieve 3% ramp rate with 55% load. The estimated expenditure for the same will also be shared by the USAID in the report. The existing ramping capability of GSECL Coal based generating units is 1% - 1.5% MW per min.</p> <p>The previous operational database of units as required by USAID has been shared with the concerned. The USAID Team has visited Ukai TPS during August 2018 in this regard & they have submitted the draft report.</p> <p>As suggested by the USAID team, the low load trial run (60%) with 1% ramp rate has been conducted by Ukai TPS during June 2019 & relevant database is submitted to the USAID team for comments & observations.</p> <p>However, the USAID has suggested to undertake 55% low load trial run of Ukai TPS 1 x 500 MW Unit with 1% ramp rate, with technical assistance of M/s BHEL being the OEM/designer of the unit. The tentative schedule for the trial is planned during Sept 19 – Oct 19 in consultation with the SLDC. Based on the trial at Ukai TPS, the similar trial will be</p>



	carried out in all the coal-based power stations & unit wise strategy for achieving 55 % load with 3% ramping capability shall be made in due course of time.
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Petition for True Up for FY 2018-19 and Tariff for FY 2020-21

ANNEXURE-I																						
PERFORMANCE PARAMETER FOR THE MONTH OF APRIL-MAY-JUNE-2019																						
Sr. No.	Power Station	PAF (%)			PLF (%)			SHR as Fired (Kcal/Kwh)			Auxil. Consumption (%)			SFC (Kg./Kwh)			Actual Gross Generation (Mus)			Net Generation (Mus)		
		April	May	June	April	May	June	April	May	June	April	May	June	April	May	June	April	May	June	April	May	June
1	Ukai (3-5)	99.33%	99.25%	94.15%	86.44%	84.59%	78.37%	2583	2602	2603	9.23%	9.31%	9.78%	0.31	0.12	1.13	379.63	383.92	344.22	344.61	348.18	310.55
2	Ukai Extn. 6	99.15%	92.36%	85.88%	88.06%	82.29%	68.63%	2398	2355	2370	6.02%	6.23%	6.70%	0.28	0.52	1.24	317.03	306.13	247.05	297.94	287.06	230.51
3	Gandhinagar (3-4)	93.54%	98.92%	99.42%	60.84%	54.46%	36.00%	2554	2562	2579	11.05%	11.22%	12.15%	1.97	1.32	2.08	183.98	170.18	108.87	163.65	151.09	95.65
4	Gandhinagar 5	101.47%	101.55%	100.65%	89.72%	87.61%	86.88%	2498	2511	2532	9.71%	9.70%	9.97%	0.00	0.04	0.00	135.66	136.88	131.37	122.29	123.60	118.27
5	Wanakbori 1-6	80.91%	88.11%	97.08%	65.55%	68.43%	56.72%	2540	2555	2538	9.36%	9.49%	9.77%	1.02	0.39	0.72	594.69	641.47	514.52	538.99	580.59	464.24
6	Wanakbori 7	93.89%	98.95%	101.11%	80.56%	83.82%	71.07%	2461	2464	2462	9.41%	9.37%	9.86%	0.83	0.41	0.77	121.82	130.97	107.46	110.35	118.70	96.87
7	Sikka Extn. (3-4)	98.07%	99.51%	101.10%	72.50%	77.97%	65.34%	2489	2480	2487	9.50%	9.33%	9.58%	1.55	0.50	1.04	261.02	290.06	235.22	236.23	263.01	212.69
8	KLTPS 1-3	44.36%	38.77%	36.09%	46.01%	40.07%	36.78%	3335	3447	3380	15.47%	16.23%	15.66%	13.01	16.48	5.76	71.22	64.10	56.94	60.20	53.70	48.02
9	KLTPS 4	60.32%	33.81%	51.54%	66.74%	37.38%	56.12%	3050	3141	3185	20.58%	25.61%	21.29%	0.01	4.40	2.79	36.04	20.86	30.31	28.62	15.52	23.85
10	BLTPS 1&2	0.00%	0.00%	2.25%	0.00%	0.00%	3.01%	0	0	4117	0.00%	0.00%	0.00%	0.00	0.00	50.25	0.00	0.00	10.83	-2.23	-1.80	5.28
11	Dhuvaran CCPP 1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0	0	0	0.00%	0.00%	0.00%	-	-	-	0.00	0.00	0.00	-0.20	-0.20	-0.16
12	Dhuvaran CCPP 2	3.80%	82.32%	53.72%	3.96%	44.98%	20.37%	2463	1859	2012	25.32%	5.93%	7.48%	-	-	-	3.21	37.63	16.50	2.39	35.40	15.26
13	Dhuvaran CCPP 3	96.74%	74.48%	100.60%	1.08%	9.51%	6.81%	3141	2093	2199	38.87%	6.14%	8.87%	-	-	-	2.92	26.62	18.44	1.79	24.99	16.81
14	Utran Extension	95.86%	98.17%	99.97%	6.65%	13.43%	14.13%	2110	1951	1874	8.18%	5.62%	5.49%	-	-	-	17.94	37.43	38.10	16.47	35.33	36.01
15	Ukai Hydro	94.91%	96.32%	96.32%	7.47%	12.60%	0.00%	-	-	-	1.32%	1.07%	0.00%	-	-	-	16.41	28.60	0.00	16.19	28.30	-0.12
16	Kadana Hydro	93.76%	93.70%	91.26%	3.91%	3.36%	4.31%	-	-	-	0.89%	0.85%	0.78%	-	-	-	6.81	6.05	7.51	6.75	6.00	7.46



Annexure II:

ANNEXURE-II				
Monthly Coal Stock Position(MT) details of 1st to 4th Quarter of 2018-19				
	TPS	Indigenous	Imported	TOTAL
April 18 (As on 30.04.18)	UTPS	148894	22640	171534
	GTPS	44962	8939	53901
	WTPS	26826	39994	66820
	STPS	12613	61392	74005
	GSECL	233295	132965	366260
May 18 (As on 31.05.18)	UTPS	27324	8288	35612
	GTPS	44172	13600	57772
	WTPS	31192	10328	41520
	STPS	12613	75067	87680
	GSECL	115301	107283	222584
June 18 (As on 30.06.18)	UTPS	86256	1528	87784
	GTPS	40723	4199	44922
	WTPS	66395	2067	68461
	STPS	12613	49518	62131
	GSECL	205987	57312	263298
July 18 (As on 31.07.18)	UTPS	135016	13627	148643
	GTPS	112575	10526	123101
	WTPS	138409	13564	151974
	STPS	12338	57127	69465
	GSECL	398338	94845	493183
August 18 (As on 31.08.18)	UTPS	146213	23910	170123
	GTPS	90588	10610	101198
	WTPS	96372	30532	126904
	STPS	12338	59773	72111
	GSECL	345510	124826	470336
September 18 (As on 30.09.18)	UTPS	60660	29278	89938
	GTPS	90450	15959	106409
	WTPS	13722	15609	29331
	STPS	11818	63327	75145
	GSECL	176650	124173	300823
October 18 (As on 31.10.18)	UTPS	19454	9753	29207
	GTPS	14863	12810	27673
	WTPS	3127	242	3369
	STPS	11678	42275	53953
	GSECL	49121	65081	114202
November 18 (As on 30.11.18)	UTPS	29786	28715	58501
	GTPS	72490	34864	107354
	WTPS	125818	963	126781
	STPS	10838	109980	120818
	GSECL	238932	174522	413454
December 18 (As on 31.12.18)	UTPS	190800	29902	220702
	GTPS	119247	25519	144766
	WTPS	279312	8011	287323
	STPS	5403	78547	83950
	GSECL	594762	141979	736741
January 19 (As on 31.01.19)	UTPS	344491	4400	348891
	GTPS	198624	24003	222627
	WTPS	352727	9509	362235
	STPS	3233	83546	86779
	GSECL	899075	121457	1020532
February 19 (As on 28.02.19)	UTPS	322088	2480	324568
	GTPS	213218	22778	235995
	WTPS	462271	17710	479981
	STPS	2568	70569	73137
	GSECL	1000144	113537	1113681
March 19 (As on 31.03.19)	UTPS	365933	6499	372432
	GTPS	326514	22778	349291
	WTPS	735283	21753	757037
	STPS	2228	106982	109210
	GSECL	1429958	158012	1587970



ANNEXURE-II				
Monthly Coal Stock Position(MT) details of 1st Quarter of 2019-20				
	TPS	Indigenous	Imported	TOTAL
April 19 (As on 30.04.19)	UTPS	271216	6497	277713
	GTPS	363738	22778	386516
	WTPS	688461	21754	710215
	STPS	999	86685	87684
	GSECL	1324414	137714	1462129
May 19 (As on 31.05.19)	UTPS	216980	10537	227516
	GTPS	338363	22778	361141
	WTPS	766682	21819	788501
	STPS	999	69808	70807
	GSECL	1323023	124942	1447965
June 19 (As on 30.06.19)	UTPS	172483	1952	174434
	GTPS	340615	19448	360063
	WTPS	829344	12790	842135
	STPS	0	74985	74985
	GSECL	1342442	109175	1451617



Annexure-IV

The Table below provides the GFA Details of various RE Assets of GSECL:

(Rs. Crore)

Sr.No.	Name of RE Plant	Gross Block as on 31.03.19 (Rs.)	Accumulated Depreciation as on 31.03.19 (Rs.)	Net Block as on 31.03.19 (Rs.)	Depreciation for the year 2018-19 (Rs.)
1	10 MW Wind	55.83	29.76	26.07	1.71
2	1 MW Chandrasan	10.26	3.45	6.81	0.52
3	1 MW Ashdyke	11.50	3.91	7.59	0.59
4	10 KW Solar Plant at Sanand	1.20	0.27	0.93	0.04
5	1 MW STPS	6.84	1.05	5.79	0.36
6	1 MW KLTPS	5.75	0.89	4.87	0.30
7	10 MW Charanka	62.19	12.98	49.21	3.28
8	75 MW Dhuvaran	351.91	2.78	349.13	2.78
	Total	505.48	55.08	450.40	9.58



SECTION 9. PRAYER

GSECL respectfully prays to the Hon'ble Commission;

- 9.1.1. To admit this petition for True Up of FY 2018-19 and Determination of Tariff for FY 2020-21.
- 9.1.2. To approve the gains/ losses for the True Up of FY 2018-19 and allow sharing of such gains/ losses as prescribed in the MYT Regulations, 2016.
- 9.1.3. To approve the operational and financial parameters of GSECL for FY 2018-19 considering the vintage and constraints of the old machines, and consider the same for recovery of full fixed cost.
- 9.1.4. To approve the Station operating parameters viz. PAF, Auxiliary Consumption, Station Heat Rate, Transit Loss, Specific Oil Consumption and actual fuel rate for each of the station of GSECL for FY 2018-19 for recovery of variable cost considering the vintage and constraints of the old machines as well as site specific constraints.
- 9.1.5. To approve Fixed Cost and Tariff for FY 2020-21.
- 9.1.6. To approve unabsorbed depreciation for Sikka Units 1 and 2.
- 9.1.7. To approved fixed cost and determine tariff for BLTPS Units 1 & 2 for FY 2020-21.
- 9.1.8. To grant any other relief as the Hon'ble Commission may consider appropriate.
- 9.1.9. The Petitioner craves leave of the Hon'ble Commission to allow further submissions, addition and alteration to this Petition as may be necessary from time to time.
- 9.1.10. Pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

Signature of the Petitioner

Gujarat State Electricity Corporation Limited

Date: 26.11.2019

Place: VADODARA

Declaration:

Declaration that the subject matter of the petition has not been raised by the petitioner before any other competent forum, and that no other competent forum is currently seized of the matter or has passed any orders in relation thereto.

Place: VADODARA

Date: 26.11.2019

Signature of the Petitioner

GUJARAT STATE ELECTRICITY CORPORATION LIMITED



**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**

Filing No. _____

Case No. _____

IN THE MATTER OF	Filing of Petition for True Up of FY 2018-19 and Determination of Tariff for FY 2020-21 under GERC MYT Regulations, 2016 and Section 62 of the Electricity Act, 2003
AND	
IN THE MATTER OF	Gujarat State Electricity Corporation Limited, Vidyut Bhavan, Race Course, Vadodara 390007 Phone No. :0265 6612003; Fax: 0265 2344537 E-mail: gmf.gsecl@gebmail.com Petitioner
AND	
IN THE MATTER OF	Gujarat Urja Vikas Nigam Limited, Sardar Patel Vidyut Bhavan, Race Course, Vadodara 390007 Phone No. 0265 6613221; Fax: 0265 2337918; E-mail: coacom@gebmail.com Respondent

Affidavit verifying the Application

I, Rajesh Mithalal Bhadang, son of Shri Mithalal Bhadang, aged about 53 years, residing at D-9, Ashirwad Duplex, Near Nisarg Complex, Diwalipura, Vadodara do solemnly affirm and say as follows:

I am General Manager (Finance & Accounts) of the Gujarat State Electricity Corporation Limited, the Petitioner in the above matter and am duly authorized by the said Petitioner to make this affidavit.

The Statements made hereinabove are true to my knowledge and belief, which I believe them to be true.

Solemnly affirmed at Vadodara on this ___ day of November 2019, that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

(R.M.Bhadang)
General Manager (F & A)
GSECL-Vadodara

Place: Vadodara.
Dated: 26.11.2019



SECTION 10. TARIFF FILING FORMATS

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