

**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**



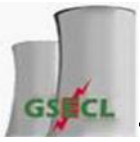
CASE NO: 1908/2020

**Determination of ARR and Tariff for FY 2021-22
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



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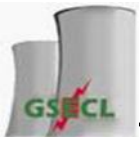
Case No: 1908/2020

IN THE MATTER OF	Filing of Petition for Determination of Aggregate Revenue Requirement and Tariff for FY 2021-22, under 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 <p style="text-align: right;">PETITIONER</p>
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 <p style="text-align: right;">RESPONDENT</p>

THE PETITIONER ABOVE NAMED RESPECTFULLY SUBMITS

**TABLE OF CONTENTS**

Section 1.	Introduction.....	352
1.1.	Preamble.....	352
1.2.	Introduction	352
Section 2.	Executive Summary	355
2.1.	Preamble.....	355
2.2.	Determination of ARR & Tariff for FY 2021-22	3556
2.3.	Energy Charges.....	357
Section 3.	GSECL's Performance & Fuel related Parameters.....	358
3.1.	Preamble.....	358
3.2.	Operating Parameters for GSECL	359
3.3.	Target Availability for recovery of full Capacity (Fixed) Charges	360
3.4.	Plant Load Factor	360
3.5.	Auxiliary Consumption	361
3.6.	Station Heat Rate	361
3.7.	Specific fuel oil consumption	362
3.8.	Transit Loss	363
3.9.	Net generation	363
3.10.	Fuel related parameters	364
Section 4.	Capital expenditure	366
4.1.	Preamble.....	366
4.2.	Capital Expenditure for existing projects	366
Section 5.	Determination of ARR For 2021-22.....	369
5.1.	Preamble.....	369
5.2.	Variable cost for proposed operational parameters	369
5.3.	Energy Charges.....	369
5.4.	Details of Fixed Cost for The period FY 2021-22	370
5.5.	Depreciation for the FY 2021-22	370
5.6.	Interest & Finance charges for the FY 2021-22	372
5.7.	Return on Equity for the FY 2021-22.....	373
5.8.	O&M Expenses for the FY 2021-22	374
5.9.	Interest on working capital for the FY 2021-22	374
5.10.	SLDC Fees & Charges for the FY 2021-22	375
5.11.	Tax for the FY 2021-22.....	375
5.12.	Incentive for the FY 2021-22.....	376
5.13.	Non-Tariff Income for the FY 2021-22.....	376
5.14.	Water Charges for the FY 2021-22.....	377
5.15.	Total Fixed Costs for the FY 2021-22.....	378



5.16. Energy Charges for the FY 2021-22	379
Section 6. Tariff for FY 2021-22	380
Section 7. Prayer	382
Section 8. Annexure – I: Tariff Filing Formats.....	385

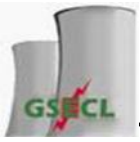
**LIST OF TABLES**

TABLE 1 : PROPOSED FIXED COST OF GSECL PLANTS FOR FY 2021-22 (RS. CRORE)	356
TABLE 2 : STATION WISE ENERGY CHARGES FOR FY 2021-22	357
TABLE 3 : CAPACITY, COD & AGE OF GSECL'S GENERATING STATIONS	358
TABLE 4 : PLANT AVAILABILITY FACTOR	360
TABLE 5 : PLANT LOAD FACTOR	361
TABLE 6 : AUXILIARY CONSUMPTION	361
TABLE 7 : STATION HEAT RATE	362
TABLE 8 : SPECIFIC OIL CONSUMPTION	362
TABLE 9 : TRANSIT LOSS	363
TABLE 10 : STATION WISE NET GENERATION FOR FY 2021-22	363
TABLE 11 : SUMMARY OF FUEL RELATED PARAMETERS	364
TABLE 12 : SUMMARY OF FUEL PRICES FOR FY 2021-22	365
TABLE 13 : CAPITAL EXPENDITURE OF GSECL (RS. CRORE)	366
TABLE 14 : CAPITALIZATION AND FUNDING DETAILS (RS. CRORE)	368
TABLE 15 : STATION WISE FUEL COST FOR FY 2021-22	369
TABLE 16 : STATION WISE ENERGY CHARGES FOR FY 2021-22	370
TABLE 17 : DEPRECIATION RATES FOR FY 2021-22	371
TABLE 18 : DEPRECIATION FOR FY 2021-22	372
TABLE 19 : INTEREST & FINANCE CHARGES FOR FY 2021-22 (Rs in Crores)	373
TABLE 20 : RETURN ON EQUITY FOR FY 2021-22 (Rs. in Crores)	373
TABLE 21 : O&M EXPENSES FOR FY 2021-22 (RS. IN CRORE)	374
TABLE 22 : INTEREST ON WORKING CAPITAL FOR FY 2021-22 (RS. IN CRORE)	375
TABLE 23 : SLDC FEES & CHARGES FOR FY 2021-22 (RS. IN CRORE)	375
TABLE 24 : TAX FOR FY 2021-22 (RS. Crores)	376
TABLE 25 : NON-TARIFF INCOME FOR FY 2021-22 (RS. CRORE)	376
TABLE 26 : WATER CHARGES FOR FY 2021-22 (RS. CRORE)	377
TABLE 27 : TOTAL FIXED COST FOR FY 2021-22 (RS. CRORE)	378
TABLE 28 : ENERGY CHARGES FOR FY 2021-22	379
TABLE 29 : ENERGY CHARGES FOR FY 2021-22	380
TABLE 30 : FIXED COSTS FOR FY 2021-22 (RS. CRORE)	381
TABLE 31 : TOTAL FIXED COSTS OF FY 2021-22 AFTER GAP/(SURPLUS) OF FY 2019-20 (RS. CRORE)	382

**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 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. Determination of Tariff for supply of Electricity' is one of the important functions of the State Electricity Regulatory Commission as provided in the Section 86 of the Electricity Act, 2003. The Act provides that:-

"Section 86 (Functions of State Commission): --- (1) The State Commission shall discharge the following functions, namely: -

(a) Determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:

Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

1.2.6. Further, the Electricity Act, 2003 also provides that-

"Section 61 (Tariff regulations):

The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the"

1.2.7. Hon'ble Commission notified the Gujarat Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2011 ("GERC MYT Regulations, 2011"). Based on the petition filed by GSECL, the Hon'ble Commission issued MYT order on 31st March, 2011 for determining the ARR for the Second Control Period i.e. FY 2011-12 to FY 2015-16 in line with provisions outlined in the GERC (MYT) Regulations, 2011.

- 1.2.8. The Hon'ble Commission has also notified the Gujarat Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2016 ("GERC MYT Regulations, 2016"). Based on the petition filed by GSECL, the Hon'ble Commission issued MYT order on 31st March, 2017 for determining the ARR for the Third Control Period i.e. FY 2016-17 to FY 2020-21 in line with provisions outlined in the GERC (MYT) Regulations, 2016. The GERC (MYT) Regulations, 2016 notified on 29.03.2016 is in force till 31st March 2021.
- 1.2.9. The process for framing the MYT Regulations for new Control Period of FY 2021-22 to FY 2025-26 was initiated by issuing public notice dated 10th October, 2020. However due to prevailing circumstances and reasons beyond the control of the Hon'ble Commission, the process related to framing of the MYT Regulations was delayed.
- 1.2.10. In the meantime, the Hon'ble Commission was in receipt of the requests from the Gujarat Urja Vikas Nigam Limited and Torrent Power Limited to provide necessary clarification/ guidance for preparation and submission of ARR and Tariff Determination for FY 2021-22.
- 1.2.11. The Hon'ble Commission has also noted that the procedure and process of framing new MYT Regulations required to be started afresh and accordingly it will not be possible to finalize the determination of tariff for FY 2021-22 within the reasonable time frame under the proposed MYT framework.
- 1.2.12. Further, the Hon'ble Commission is also of the opinion that it may be difficult for the utilities to make realistic projections and business plan for the 5 year control period in view of the prevailing circumstances at present.
- 1.2.13. In view of the above, it is proposed to defer the 5 year control period for new MYT Regulations for one year and consider the control period from FY 2022-23 to FY 2026-27. Accordingly, the Hon'ble Commission directed all the concerned utilities and licensees to file annual ARR for FY 2021-22 and application for determination of tariff for FY 2021-22 based on the principles and methodology as provided in the GERC (Multi-Year Tariff) Regulations, 2016.
- 1.2.14. The GERC (Multi-Year Tariff) Regulations, 2016 provides that:-

"1.2 These Regulations shall come into effect from the date of their publication in the Official Gazette and shall remain in force till 31st March, 2021, unless otherwise reviewed/extended.

..

7. Saving of Inherent Power of the Commission

7.1 Nothing in these Regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for ends of justice or to prevent the abuse of the process of the Commission.

7.2 Nothing in these Regulations shall bar the Commission from adopting in conformity with the provisions of the Act, a procedure, which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in

writing, deems it necessary or expedient for dealing with such a matter or class of matters.

7.3 Nothing in these Regulations shall, expressly or by implication, bar the Commission to deal with any matter or exercise any power under the Acts for which no Regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

..

12. Power of Relaxation

The Commission, for reasons to be recorded in writing, may relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.”

- 1.2.15. In view of the background and reasons mentioned above and looking to the requirement and importance of timely determination of tariff for supply of electricity, the Hon'ble Commission has proposed to differ implementation of new MYT control period by one year and adopt the determination of annual ARR and determination of tariff for FY 2021-22. Further, the Hon'ble Commission has directed all the regulated Generating Stations, Transmission Licensee, SLDC and Distribution Licensees (including deemed Licensees) to file application/ petition for the determination of Annual ARR for FY 2021-22 and proposal for determination of tariff for FY 2021-22.
- 1.2.16. Accordingly, GSECL is filing Aggregate Revenue Requirement and Tariff Petition for FY 2021-22 to the Hon'ble Commission.



SECTION 2. EXECUTIVE SUMMARY

2.1. PREAMBLE

2.1.1. This section highlights the summary of Petition for Determination of Aggregate Revenue Requirement & Tariff for FY 2021-22.

2.2. DETERMINATION OF ARR & TARIFF FOR FY 2021-22

2.2.1. As directed by the Hon'ble Commission, GSECL has projected the Fixed and variable cost for FY 2021-22 on the basis of GERC MYT Regulations, 2016. The basis of such projections has been dealt in detail in subsequent sections if the petition.

2.2.2. The Fixed and Variable cost of GSECL's Generating Plants for FY 2021-22 is estimated as under:

TABLE 1 : PROPOSED FIXED COST OF GSECL PLANTS FOR FY 2021-22 (RS. CRORE)

Sr. No.	Power Station	Depreciation	Interest & Finance Charges	Return on Equity	Interest on Working Capital	O&M Expenses	Tax	SLDC Fees & Charges	Water Charges	Total Fixed Cost	Less: Non-Tariff Income	Net Fixed Charges
1	Ukai (3-5)	44.15	0.60	23.93	36.21	194.62	3.46	0.38	-	303.34	33.46	269.88
2	Gandhinagar (3-4)	34.41	0.69	25.32	28.61	108.25	2.38	0.26	42.10	242.00	10.18	231.82
3	Gandhinagar 5*	2.16	-	28.67	13.62	27.58	1.19	0.13	21.05	94.41	9.96	84.45
4	Wanakbori 1-6 TPS	96.47	19.31	96.28	81.24	283.23	7.14	0.78	38.46	622.91	43.02	579.89
5	Wanakbori 7 TPS*	2.18	0.13	26.43	12.99	22.89	1.19	0.13	10.17	76.10	14.44	61.66
6	Sikka Extn. (3-4)*	173.55	106.95	138.05	35.11	119.36	2.83	0.31	5.11	581.28	5.17	576.11
7	KLTPS 3	29.62	0.34	36.12	4.96	47.32	0.42	0.05	0.09	118.92	2.48	116.44
8	KLTPS 4	36.35	4.92	29.65	4.27	23.24	0.42	0.05	0.15	99.04	4.51	94.53
9	BLTPS*	194.05	121.61	154.36	30.16	178.24	-	0.32	6.32	685.05	14.84	670.21
10	Dhuvaran CAPP 1*	9.74	0.01	10.47	5.22	39.53	0.60	0.07	0.19	65.82	0.73	65.10
11	Dhuvaran CAPP 2	13.03	1.95	14.53	5.85	39.62	0.64	0.07	0.20	75.90	0.73	75.17
12	Dhuvaran CAPP 3*	78.77	52.55	67.01	21.39	82.30	2.13	0.23	0.66	305.06	0.95	304.11
13	Utran Extension*	68.26	21.21	57.53	20.68	65.58	2.12	0.23	2.40	238.01	0.47	237.53
14	Ukai 6*	156.83	72.56	126.57	32.55	119.36	2.83	0.31	-	511.02	15.43	495.59
15	Wanakbori 8 TPS*	211.62	220.12	184.95	53.33	162.32	-	0.03	5.95	838.32	0.40	837.91
16	Ukai Hydro	2.37	1.95	10.82	0.75	23.88	1.73	0.19	-	41.69	0.15	41.54
17	Kadana Hydro	5.50	0.15	28.98	1.15	28.76	1.37	0.15	-	66.05	0.39	65.66
	Total	1,159.06	625.06	1,059.65	388.08	1,566.09	30.47	3.69	132.84	4,964.93	157.32	4,807.61

2.3. ENERGY CHARGES

2.3.1. GSECL has determined Station wise per unit charges for the FY 2021-22 as mentioned below table:

TABLE 2 : STATION WISE ENERGY CHARGES FOR FY 2021-22

Sl. No:	Power Station	FY 2021-22
		Rs/KWh
1	Ukai (3-5)	3.73
2	Gandhinagar (3-4)	4.09
3	Gandhinagar 5*	3.97
4	Wanakbori 1-6 TPS	3.93
5	Wanakbori 7 TPS*	3.84
6	Sikka Extn. (3-4)*	3.58
7	KLTPS 3	2.77
8	KLTPS 4	2.56
9	BLTPS*	2.88
10	Dhuvaran CCPP 1*	3.03
11	Dhuvaran CCPP 2	3.22
12	Dhuvaran CCPP 3*	3.57
13	Utran Extension*	3.64
14	Ukai 6*	3.26
15	Wanakbori 8 TPS*	3.36
16	Ukai Hydro	0.00
17	Kadana Hydro	0.00

* PPA governed stations

2.3.2. GSECL requests the Hon'ble Commission to approve ARR & Energy charges for the FY 2021-22. Further, GSECL requests Hon'ble Commission to approve the tariff for FY 2021-22 & Energy Charges as mentioned above & detailed in subsequent sections.

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. 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.

3.1.2. The following table gives the details of the generating stations along with their capacity and the date of Commissioning:

TABLE 3 : CAPACITY, COD & AGE OF GSECL'S GENERATING STATIONS

Name of Station	Unit No.	Capacity of the Unit (MW)	Date of Commissioning
Ukai	3	200	21/1/1979
	4	200	11/9/1979
	5	210	30/1/1985
	Sub Total	610	
Gandhinagar	3	210	20/3/1990
	4	210	20/7/1991
	5	210	17/3/1998
	Sub Total	630	
Wanakbori	1	210	23/3/1982
	2	210	15/1/1983
	3	210	15/3/1984
	4	210	9/3/1986
	5	210	23/9/1986
	6	210	18/11/1987
	7	210	31/12/1998
	Sub Total	1470	
KLTPS	3	75	31/3/1997
	4	75	20/12/2009
	Sub Total	150	
BLTPS	1	250	16/05/2016
	2	250	27/03/2017
	Sub Total	500	
Dhuvaran	7 - Gas	106.617	28/1/2004
	8 - Gas	112.45	1/11/2007
	Sub Total	219.067	
Utran Extension	GT -1	375	8/11/2009
Sikka TPS 3&4	3	250	14/9/2015
	4	250	28/12/2015
	Sub Total	500	
Ukai TPS	6	500	8/6/2013
Dhuvaran (Gas)	3	376	01/02/2016
Wanakbori	8	800	13/10/2019



Name of Station	Unit No.	Capacity of the Unit (MW)	Date of Commissioning
SUB TOTAL GSECL (Coal + Lignite)		5160	
SUB TOTAL GSECL (Gas)		970	
TOTAL GSECL (Thermal)		6130	
Ukai Hydro	1	75	8/7/1974
	2	75	13/12/1974
	3	75	22/4/1975
	4	75	4/3/1976
	Sub Total	300	
Ukai LBC	1	2.5	8/12/1987
	2	2.5	19/2/1988
	Sub Total	5	
Kadana Hydro	1	60	31/3/1990
	2	60	2/9/1990
	3	60	3/1/1998
	4	60	27/5/1998
	Sub Total	240	
Wind Mill	Layza	10	04/01/2009
Solar	Plant at GTPS (Ash Dyke)	1	27/03/2012
	Plant at Sanand branch 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
Sub Total RE		99	
Total		6776	

3.1.1. GSECL would like to inform that KLTPS unit 1 & 2 are decommissioned from 01st January, 2020.

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 etc. The justification for the operational parameters has been discussed in detail in the subsequent sections.

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

3.3.1. For FY 2021-22, the plant availability factor is considered same as the approved plant availability factor of FY 2020-21 in MYT Order of 31st March, 2017 for all power plants except BLTPS for which PAF approved in True-up Order of 26th March 2020 is considered.

3.3.2. The plant availability factor of the GSECL station in FY 2021-22 for recovery of fixed charges is shown as per the table below.

TABLE 4 : PLANT AVAILABILITY FACTOR

Sr.No	Plant	Projections
		2021-22
1	Ukai (3-5)	80.00%
2	Gandhinagar (3-4)	84.00%
3	Gandhinagar 5*	85.00%
4	Wanakbori 1-6 TPS	85.00%
5	Wanakbori 7 TPS*	85.00%
6	Sikka Extn. (3-4)*	85.00%
7	KLTPS 3	75.00%
8	KLTPS 4	80.00%
9	BLTPS*	80.00%
10	Dhuvaran CCPP 1*	85.00%
11	Dhuvaran CCPP 2	85.00%
12	Dhuvaran CCPP 3*	85.00%
13	Utran Extension*	85.00%
14	Ukai 6*	85.00%
15	Wanakbori 8 TPS*	85.00%
16	Ukai Hydro	80.00%
17	Kadana Hydro	80.00%

* PPA governed stations

3.4. PLANT LOAD FACTOR

3.4.1. For FY 2021-22, the plant load factor is considered same as the approved plant load factor of FY 2020-21 in MYT Order of 31st March, 2017 for all power plants except BLTPS for which PLF approved in True-up Order of 26th March 2020 is considered.

3.4.2. The Plant Load Factor of the GSECL station in FY 2021-22 is shown as per the table below.

TABLE 5 : PLANT LOAD FACTOR

Sr.No	Plant	Projections
		2021-22
1	Ukai (3-5)	58.00%
2	Gandhinagar (3-4)	45.00%
3	Gandhinagar 5*	77.00%
4	Wanakbori 1-6 TPS	50.00%
5	Wanakbori 7 TPS*	70.00%
6	Sikka Extn. (3-4)*	70.00%
7	KLTPS 3	75.00%
8	KLTPS 4	75.00%
9	BLTPS*	80.00%
10	Dhuvaran CCPP 1*	25.00%
11	Dhuvaran CCPP 2	25.00%
12	Dhuvaran CCPP 3*	25.00%
13	Utran Extension*	25.00%
14	Ukai 6*	77.00%
15	Wanakbori 8 TPS*	85.00%
16	Ukai Hydro	13.00%
17	Kadana Hydro	6.00%

* PPA governed stations

3.5. AUXILIARY CONSUMPTION

3.5.1. For FY 2021-22, the auxiliary consumption is considered same as the approved auxiliary consumption of FY 2020-21 in MYT Order of 31st March, 2017 for all power plants except BLTPS for which auxiliary consumption approved in True-up Order of 26th March 2020 is considered.

3.5.2. The auxiliary consumption of the GSECL station in FY 2021-22 is shown as per the table below.

TABLE 6 : AUXILIARY CONSUMPTION

Sr.No	Plant	Projections
		2021-22
1	Ukai (3-5)	9.00%
2	Gandhinagar (3-4)	9.00%
3	Gandhinagar 5*	9.50%
4	Wanakbori 1-6 TPS	9.00%
5	Wanakbori 7 TPS*	9.50%
6	Sikka Extn. (3-4)*	9.00%
7	KLTPS 3	12.00%
8	KLTPS 4	12.00%
9	BLTPS*	11.00%
10	Dhuvaran CCPP 1*	4.00%
11	Dhuvaran CCPP 2	3.00%
12	Dhuvaran CCPP 3*	3.00%
13	Utran Extension*	3.00%
14	Ukai 6*	6.00%
15	Wanakbori 8 TPS*	5.25%
16	Ukai Hydro	0.60%
17	Kadana Hydro	1.00%

* PPA governed stations

3.6. STATION HEAT RATE

3.6.1. For FY 2021-22, the station heat rate is considered same as the approved station heat rate of FY 2020-21 in MYT Order of 31st March, 2017 for all power plants except BLTPS for which station heat rate approved in True-up Order of 26th March 2020 is considered.

3.6.2. The Station Heat Rate of the GSECL station in FY 2021-22 is shown as per the table below.

TABLE 7 : STATION HEAT RATE

Sr.No	Plant	In Kcal/KWh
		Projections 2021-22
1	Ukai (3-5)	2625
2	Gandhinagar (3-4)	2625
3	Gandhinagar 5*	2460
4	Wanakbori 1-6 TPS	2575
5	Wanakbori 7 TPS*	2460
6	Sikka Extn. (3-4)*	2398
7	KLTPS 3	3231
8	KLTPS 4	3000
9	BLTPS*	2623
10	Dhuvaran CCPP 1*	1950
11	Dhuvaran CCPP 2	1950
12	Dhuvaran CCPP 3*	1850
13	Utran Extension*	1850
14	Ukai 6*	2385
15	Wanakbori 8 TPS*	2248
16	Ukai Hydro	0
17	Kadana Hydro	0

* PPA governed stations

3.7. SPECIFIC FUEL OIL CONSUMPTION

3.7.1. For FY 2021-22, the specific oil consumption is considered same as the approved specific oil consumption of FY 2020-21 in MYT Order of 31st March, 2017 for all power plants except BLTPS for which specific oil consumption approved in True-up Order of 26th March 2020 is considered.

3.7.2. The specific oil consumption of the GSECL station in FY 2021-22 is shown as per the table below.

TABLE 8 : SPECIFIC OIL CONSUMPTION

Sr.No	Plant	In ml/KWh
		Projections 2021-22
1	Ukai (3-5)	1.0
2	Gandhinagar (3-4)	1.0
3	Gandhinagar 5*	3.5
4	Wanakbori 1-6 TPS	1.0
5	Wanakbori 7 TPS*	3.5
6	Sikka Extn. (3-4)*	1.0
7	KLTPS 3	3.0
8	KLTPS 4	3.0
9	BLTPS*	1.0
10	Dhuvaran CCPP 1*	0.0
11	Dhuvaran CCPP 2	0.0
12	Dhuvaran CCPP 3*	0.0
13	Utran Extension*	0.0
14	Ukai 6*	1.0
15	Wanakbori 8 TPS*	0.5
16	Ukai Hydro	0.0
17	Kadana Hydro	0.0

* PPA governed stations

3.8. TRANSIT LOSS

- 3.8.1. For FY 2021-22, the transit loss is considered same as the approved transit loss of FY 2020-21 in MYT Order of 31st March, 2017 for all power plants except BLTPS for which transit loss approved in True-up Order of 26th March 2020 is considered.
- 3.8.2. The Transit loss of the GSECL station in FY 2021-22 for recovery of fixed charges is shown as per the table below.

TABLE 9 : TRANSIT LOSS

Sr.No	Plant	Projections
		2021-22
1	Ukai (3-5)	0.80%
2	Gandhinagar (3-4)	0.80%
3	Gandhinagar 5*	0.80%
4	Wanakbori 1-6 TPS	0.80%
5	Wanakbori 7 TPS*	0.80%
6	Sikka Extn. (3-4)*	0.00%
7	KLTPS 3	0.20%
8	KLTPS 4	0.20%
9	BLTPS*	0.80%
10	Dhuvaran CCPP 1*	0.00%
11	Dhuvaran CCPP 2	0.00%
12	Dhuvaran CCPP 3*	0.00%
13	Utran Extension*	0.00%
14	Ukai 6*	0.80%
15	Wanakbori 8 TPS*	0.80%
16	Ukai Hydro	0.00%
17	Kadana Hydro	0.00%

* PPA governed stations

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 2021-22 has been mentioned below:

TABLE 10 : STATION WISE NET GENERATION FOR FY 2021-22

Sr.No.	Power Station	Gross Generation	Auxiliary Consumption	Net Generation
		2021-22		
1	Ukai (3-5)	3099.29	278.94	2820.35
2	Gandhinagar (3-4)	1655.64	149.01	1506.63
3	Gandhinagar 5*	1416.49	134.57	1281.93
4	Wanakbori 1-6 TPS	5518.80	496.69	5022.11
5	Wanakbori 7 TPS*	1287.72	122.33	1165.39
6	Sikka Extn. (3-4)*	3066.00	275.94	2790.06
7	KLTPS 3	492.75	59.13	433.62
8	KLTPS 4	492.75	59.13	433.62
9	BLTPS*	3504.00	385.44	3118.56
10	Dhuvaran CCPP 1*	233.49	9.34	224.15
11	Dhuvaran CCPP 2	246.27	7.39	238.88
12	Dhuvaran CCPP 3*	823.66	24.71	798.95
13	Utran Extension*	820.31	24.61	795.70
14	Ukai 6*	3372.60	202.36	3170.24
15	Wanakbori 8 TPS*	5956.80	312.73	5644.07
16	Ukai Hydro	347.33	2.08	345.25
17	Kadana Hydro	127.20	1.27	125.92

* PPA governed stations

3.10. FUEL RELATED PARAMETERS

3.10.1. Weighted average Gross Calorific Value of primary fuels & secondary fuel and coal mix for FY 2021-22 is considered same as actual value of weighted average Gross Calorific Value of primary fuels & secondary fuel and coal mix of FY 2019-20.

3.10.2. The table below summaries value of weighted average Gross Calorific Value of primary fuels and secondary fuel considered by GSECL, coal mix for FY 2021-22 is mentioned below:

TABLE 11 : SUMMARY OF FUEL RELATED PARAMETERS

Sr.No.	Power Plant	Particulars	Mix of Coal			Weighted average GCV of Lignite	Weighted average GCV of coal	Weighted average GCV of gas	Weighted average GCV of Oil
			Indigenous	Washed	Imported	Kcal/Kg	Kcal/Kg	Kcal/SCM	Kcal/litre
1	Ukai (3-5)	FY 21-22 (Projection)	20.25%	79.40%	0.34%	-	3,788	-	10,461
2	Gandhinagar (3-4)	FY 21-22 (Projection)	26.03%	73.07%	0.90%	-	3,755	-	10,440
3	Gandhinagar 5*	FY 21-22 (Projection)	17.34%	79.90%	2.77%	-	3,755	-	10,482
4	Wanakbori 1-6 TPS	FY 21-22 (Projection)	15.23%	84.09%	0.68%	-	3,882	-	10,350
5	Wanakbori 7 TPS*	FY 21-22 (Projection)	15.30%	84.09%	0.61%	-	3,861	-	10,371
6	Sikka Extn. (3-4)*	FY 21-22 (Projection)	0.00%	0.12%	99.88%	-	5,129	-	10,285
7	KLTPS 3	FY 21-22 (Projection)	0.00%	0.00%	0.00%	2,282	-	-	10,311
8	KLTPS 4	FY 21-22 (Projection)	0.00%	0.00%	0.00%	2,282	-	-	10,311
9	BLTPS*	FY 21-22 (Projection)	0.00%	0.00%	0.00%	2,753	-	-	10,807
10	Dhuvaran CCPP 1*	FY 21-22 (Projection)	0.00%	0.00%	0.00%	-	-	9,544	-
11	Dhuvaran CCPP 2	FY 21-22 (Projection)	0.00%	0.00%	0.00%	-	-	9,393	-
12	Dhuvaran CCPP 3*	FY 21-22 (Projection)	0.00%	0.00%	0.00%	-	-	9,268	-
13	Utran Extension*	FY 21-22 (Projection)	0.00%	0.00%	0.00%	-	-	9,327	-
14	Ukai 6*	FY 21-22 (Projection)	13.06%	86.74%	0.21%	-	3,830	-	10,479
15	Wanakbori 8 TPS*	FY 21-22 (Projection)	13.14%	86.86%	0.00%	-	3,807	-	10,363

* PPA governed stations

- 3.10.3. The Fuel related parameters mentioned above have been used for computation of variable cost for GSECL stations.
- 3.10.4. The actual coal prices along with the mix of coal of FY 2021-22 are considered same as of FY 2019-20. The summary of coal prices for FY 2021-22 along with mix of coal is shown in following table.

TABLE 12 : SUMMARY OF FUEL PRICES FOR FY 2021-22

Sr.No.	Power Plant	Particulars	Cost of indigenous coal (Rs./MT)	Cost of Washed Coal (Rs./MT)	Cost of Imported Coal (Rs./MT)	Weighted average Cost of Coal/lignite (Rs./MT)	Cost of Gas (Rs./SCM)	Cost of Oil (Rs./KI)
1	Ukai (3-5)	FY 21-22 (Projection)	3,845	5,064	7,854	4,827	-	39,186
2	Gandhinagar (3-4)	FY 21-22 (Projection)	4,371	5,524	7,756	5,244	-	37,442
3	Gandhinagar 5*	FY 21-22 (Projection)	4,052	5,495	7,752	5,307	-	39,596
4	Wanakbori 1-6 TPS	FY 21-22 (Projection)	4,270	5,479	7,542	5,309	-	38,244
5	Wanakbori 7 TPS*	FY 21-22 (Projection)	4,188	5,459	7,512	5,277	-	38,619
6	Sikka Extn. (3-4)*	FY 21-22 (Projection)	-	5,181	6,917	6,915	-	42,343
7	KLTPS 3	FY 21-22 (Projection)	-	-	-	1,649	-	42,217
8	KLTPS 4	FY 21-22 (Projection)	-	-	-	1,621	-	48,207
9	BLTPS*	FY 21-22 (Projection)	-	-	-	2,652	-	47,992
10	Dhuvaran CCPP 1*	FY 21-22 (Projection)	-	-	-	-	14.22	-
11	Dhuvaran CCPP 2	FY 21-22 (Projection)	-	-	-	-	15.03	-
12	Dhuvaran CCPP 3*	FY 21-22 (Projection)	-	-	-	-	17.35	-
13	Utran Extension*	FY 21-22 (Projection)	-	-	-	-	17.79	-
14	Ukai 6*	FY 21-22 (Projection)	3,756	4,990	7,757	4,835	-	39,328
15	Wanakbori 8 TPS*	FY 21-22 (Projection)	4,041	5,533	-	5,337	-	37,178

* PPA governed stations

- 3.10.5. 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. CAPITAL EXPENDITURE

4.1. PREAMBLE

4.1.1. This section deals with projected capital expenditure for the FY 2021-22.

4.2. CAPITAL EXPENDITURE FOR EXISTING PROJECTS

4.2.1. The capital expenditure proposed to be carried out on existing plants of GSECL during FY 2021-22 has been tabulated below. These expenditures include major and minor R&M works proposed to be undertaken by GSECL during the year.

TABLE 13 : CAPITAL EXPENDITURE OF GSECL (Rs. Crore)

Sr.No	Plant	FY 21-22
1	Ukai (3-5)	20.80
2	Gandhinagar (3-4)	23.72
3	Gandhinagar 5*	-
4	Wanakbori 1-6 TPS	115.75
5	Wanakbori 7 TPS*	4.77
6	Sikka Extn. (3-4)*	25.97
7	KLTPS 3	16.13
8	KLTPS 4	-
9	BLTPS*	77.15
10	Dhuvaran CCPP 1*	0.19
11	Dhuvaran CCPP 2	0.19
12	Dhuvaran CCPP 3*	-
13	Utran Extension*	0.51
14	Ukai 6*	17.33
15	Wanakbori 8 TPS*	-
16	Ukai Hydro	8.14
17	Kadana Hydro	5.05

* PPA governed stations

4.2.2. The above mentioned capital expenditure includes expenditure on Major R&M expenditure and Minor R&M expenditure. As can be seen from the above, GSECL proposes a capital expenditure of Rs. 315.69 Crores in FY 2021-22 on existing projects.

4.2.3. CAPEX for R&M:

ESP Retrofitting of 200/210 MW old units of Wanakbori TPS and Ukai TPS

To bring down the ESP emission within limits prescribed by GPCB, Company has carry out Conditional Assessment (CA) of all the ESPs of GSECL through BHEL and further detailed study thereof. Company has also carried out the detailed study for replacement, modification, R&M etc. of ESPs to bring down the emission level within the permissible limit set by GPCB. The old units were designed as per GPCB norms prevailing at the time of commissioning. Hence, in order to meet the present MoEF norms it is necessary to carryout retrofitting of ESP for old 200/210 MW units of GSECL.

Benefits:

As our Units are old and facilitated with ESP with the consideration of high SPM level norms of that respective time & it is not sufficient to fulfil the requirement of present pollution control norms, which are likely to become more stringent in near future.



To achieve the limit of pollution control prevailing norms additional collecting surface area (ESP Fields) is necessary to carryout retrofiting.

Looking to meet the requirement of pollution norms and for Green power GSECL has taken ESP retrofiting work under R&M activity to reduce SPM level at 50mg/NM3.

- 4.2.4. GSECL request the Hon'ble Commission to approve the above capital expenditure to be incurred in FY 2021-22.
- 4.2.5. GSECL has proposed capitalization based on the capital expenditure carried out in FY 2020-21 and FY 2021-22 The capital expenditure will funded through debt-equity ratio of 70:30 in accordance with GERC MYT Regulations, 2016.

TABLE 14 : CAPITALIZATION AND FUNDING DETAILS (RS. CRORE)

Sr. No.	Station	Particulars	FY 21-22
			Projections
1	Ukai (3-5)	Debt	14.56
		Equity	6.24
		Total	20.80
2	Gandhinagar (3-4)	Debt	16.61
		Equity	7.12
		Total	23.72
3	Gandhinagar 5*	Debt	-
		Equity	-
		Total	-
4	Wanakbori 1-6 TPS	Debt	124.15
		Equity	53.21
		Total	177.35
5	Wanakbori 7 TPS*	Debt	3.34
		Equity	1.43
		Total	4.77
6	Sikka Extn. (3-4)*	Debt	18.18
		Equity	7.79
		Total	25.97
7	KLTPS 3	Debt	8.35
		Equity	3.58
		Total	11.93
8	KLTPS 4	Debt	-
		Equity	-
		Total	-
9	BLTPS*	Debt	54.00
		Equity	23.14
		Total	77.15
10	Dhuvaran CCPP 1*	Debt	0.13
		Equity	0.06
		Total	0.19
11	Dhuvaran CCPP 2	Debt	0.13
		Equity	0.06
		Total	0.19
12	Dhuvaran CCPP 3*	Debt	-
		Equity	-
		Total	-
13	Utran Extension*	Debt	0.36
		Equity	0.15
		Total	0.51
14	Ukai 6*	Debt	12.13
		Equity	5.20
		Total	17.33
15	Wanakbori 8 TPS*	Debt	-
		Equity	-
		Total	-
16	Ukai Hydro	Debt	5.70
		Equity	2.44
		Total	8.14
17	Kadana Hydro	Debt	3.54
		Equity	1.52
		Total	5.05
	Total	Debt	261.17
		Equity	111.93
		Total	373.09

* PPA governed stations

4.2.6. GSECL requests the Hon'ble Commission to approve the above capitalization along with the funding pattern for the FY 2021-22.

SECTION 5. DETERMINATION OF ARR FOR 2021-22

5.1. PREAMBLE

5.1.1. This section outlines details of fixed and variable cost components proposed by the GSECL for the period of FY 2021-22.

5.2. VARIABLE COST FOR PROPOSED OPERATIONAL PARAMETERS

5.2.1. The proposed variable cost for GSECL plants for the period of FY 2021-22 are based on the projected operational parameters, GCV and cost of different fuels for the given period as discussed in previous sections of this petition.

TABLE 15 : STATION WISE FUEL COST FOR FY 2021-22

Sl. No:	Power Station	FY 2021-22	
		Net Generation (MU)	Fuel cost (Rs Cr)
1	Ukai (3-5)	2820.35	1053.05
2	Gandhinagar (3-4)	1506.63	615.53
3	Gandhinagar 5*	1281.93	508.58
4	Wanakbori 1-6 TPS	5022.11	1972.22
5	Wanakbori 7 TPS*	1165.39	447.38
6	Sikka Extn. (3-4)*	2790.06	1000.09
7	KLTPS 3	433.62	120.19
8	KLTPS 4	433.62	111.03
9	BLTPS*	3118.56	898.42
10	Dhuvaran CCPP 1*	224.15	67.84
11	Dhuvaran CCPP 2	238.88	76.84
12	Dhuvaran CCPP 3*	798.95	285.25
13	Utran Extension*	795.70	289.38
14	Ukai 6*	3170.24	1032.43
15	Wanakbori 8 TPS*	5644.07	1899.10
16	Ukai Hydro	0.00	0.00
17	Kadana Hydro	0.00	0.00

* PPA governed stations

5.3. ENERGY CHARGES

5.3.1. GSECL has determined Station wise per unit charges for the period FY 2021-22 as mentioned below table:

TABLE 16 : STATION WISE ENERGY CHARGES FOR FY 2021-22

Sl. No:	Power Station	FY 2021-22
		Rs/KWh
1	Ukai (3-5)	3.73
2	Gandhinagar (3-4)	4.09
3	Gandhinagar 5*	3.97
4	Wanakbori 1-6 TPS	3.93
5	Wanakbori 7 TPS*	3.84
6	Sikka Extn. (3-4)*	3.58
7	KLTPS 3	2.77
8	KLTPS 4	2.56
9	BLTPS*	2.88
10	Dhuvaran CCPP 1*	3.03
11	Dhuvaran CCPP 2	3.22
12	Dhuvaran CCPP 3*	3.57
13	Utran Extension*	3.64
14	Ukai 6*	3.26
15	Wanakbori 8 TPS*	3.36
16	Ukai Hydro	0.00
17	Kadana Hydro	0.00

* PPA governed stations

5.4. DETAILS OF FIXED COST FOR THE PERIOD FY 2021-22

5.4.1. This section deals with the approach adopted by GSECL for projecting the fixed cost for the GSECL Power plants for the period FY 2021-22. The Annual Revenue Requirement for the period FY 2021-22 is projected based on GERC MYT Regulations, 2016. The methodology for projections has been discussed in detail in subsequent paragraphs.

5.4.2. Total fixed cost for the period FY 2021-22 has been bifurcated into following elements:

1. Depreciation
2. Interest and Financing Charges
3. Return on Equity
4. O & M Expenses
5. Interest on Working Capital
6. Tax on Income
7. SLDC Charges
8. Water charges
9. Non-Tariff income

5.5. DEPRECIATION FOR THE FY 2021-22

5.5.1. The opening Gross Fixed Assets for FY 2021-22 has been arrived on closing gross block of FY 2020-21. The capital addition to the fixed asset during the period FY 2021-22 has been considered based on the works which are likely to be capitalized during the year as mentioned in Capital Expenditure section.

5.5.2. GSECL has considered Depreciation rates based on actual rate of depreciation in FY 2019-20 or average depreciation rate of 5.28% whichever is lower.

5.5.3. For Generating Stations under the transfer scheme, the depreciation has been calculated as per the GERC MYT Regulations, 2016. The relevant clause has been reproduced as under:

“Provided further that for a Generating Company or a Transmission Licensee or SLDC or a Distribution Licensee formed as a result of a Transfer Scheme, the depreciation on assets transferred under the Transfer Scheme shall be charged as per rates specified in these Regulations for a period of 12 years from the date of the Transfer Scheme, and thereafter depreciation will be spread over the balance useful life of the asset”

5.5.4. As per GSECL’s Policy, the useful life has been extended to 35 years for thermal and hydro.

5.5.5. Table below indicates plant wise depreciation rates considered by GSECL.

TABLE 17 : DEPRECIATION RATES FOR FY 2021-22

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	3.25%
2	Gandhinagar (3-4)	2.70%
3	Gandhinagar 5*	0.33%
4	Wanakbori 1-6 TPS	3.80%
5	Wanakbori 7 TPS*	0.34%
6	Sikka Extn. (3-4)*	5.28%
7	KLTPS 3	3.10%
8	KLTPS 4	5.14%
9	BLTPS*	5.28%
10	Dhuvaran CCPP 1*	2.39%
11	Dhuvaran CCPP 2	3.02%
12	Dhuvaran CCPP 3*	4.94%
13	Utran Extension*	5.02%
14	Ukai 6*	5.20%
15	Wanakbori 8 TPS*	4.81%
16	Ukai Hydro	1.28%
17	Kadana Hydro	1.64%

* PPA governed stations

5.5.6. The table below indicates the GSECL’s plant wise Depreciation for FY 2021-22 projected on the basis of revised estimates of FY 2021-22, proposed capitalization and above depreciation rates.

TABLE 18 : DEPRECIATION FOR FY 2021-22

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	44.15
2	Gandhinagar (3-4)	34.41
3	Gandhinagar 5*	2.16
4	Wanakbori 1-6 TPS	96.47
5	Wanakbori 7 TPS*	2.18
6	Sikka Extn. (3-4)*	173.55
7	KLTPS 3	29.62
8	KLTPS 4	36.35
9	BLTPS*	194.05
10	Dhuvaran CCPP 1*	9.74
11	Dhuvaran CCPP 2	13.03
12	Dhuvaran CCPP 3*	78.77
13	Utran Extension*	68.26
14	Ukai 6*	156.83
15	Wanakbori 8 TPS*	211.62
16	Ukai Hydro	2.37
17	Kadana Hydro	5.50

* PPA governed stations

5.5.7. GSECL requests the Hon'ble Commission to approve Depreciation mentioned in above table for the FY 2021-22 for various stations of GSECL.

5.6. INTEREST & FINANCE CHARGES FOR THE FY 2021-22

5.6.1. The funding for new capital expenditure in the FY 2021-22 has been assumed to be undertaken at a normative debt: equity ratio of 70:30 in accordance with the GERC Multi-Year Tariff Regulations, 2016 and accordingly the new loan additions during the year has been estimated.

5.6.2. Weighted average rate of interest has been considered for the computation of Interest on Loans. The Interest rate of 8.26% is assumed on the basis of actuals of FY 2019-20 has been considered in line with the present market scenario.

5.6.3. As stated in the GERC Multi-Year Tariff Regulations, 2016, repayment shall be considered as equivalent to depreciation for the year. The relevant extracts of the regulations is produced as under:

“The repayment for the year during the Control Period from FY 2021-22to FY 2025-26 shall be deemed to be equal to the depreciation allowed for that year.”

“Notwithstanding any moratorium period availed by the Generating Company or the Transmission Licensee or SLDC or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.”

5.6.4. Based on the above interest rates, the interest & finance charges for FY 21-22 is computed & shown below:

TABLE 19 : INTEREST & FINANCE CHARGES FOR FY 2021-22 (Rs in Crores)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	0.60
2	Gandhinagar (3-4)	0.69
3	Gandhinagar 5*	-
4	Wanakbori 1-6 TPS	19.31
5	Wanakbori 7 TPS*	0.13
6	Sikka Extn. (3-4)*	106.95
7	KLTPS 3	0.34
8	KLTPS 4	4.92
9	BLTPS*	121.61
10	Dhuvaran CCPP 1*	0.01
11	Dhuvaran CCPP 2	1.95
12	Dhuvaran CCPP 3*	52.55
13	Utran Extension*	21.21
14	Ukai 6*	72.56
15	Wanakbori 8 TPS*	220.12
16	Ukai Hydro	1.95
17	Kadana Hydro	0.15

* PPA governed stations

- 5.6.5. GSECL has estimated the other finance charges to be same as actual in FY 2019-20.
- 5.6.6. GSECL requests the Hon'ble Commission to approve the Interest and Finance charges which include the other finance charges for each of the station of GSECL for the FY 2021-22 as proposed in the above table.

5.7. RETURN ON EQUITY FOR THE FY 2021-22

- 5.7.1. The Return on Equity for FY 2021-22 has been computed on normative basis i.e. at 14% for all transferred stations (non-PPA based stations), in line with the GERC Multi-Year Tariff Regulations 2016. For projecting return on equity for FY 2021-22, GSECL has considered closing equity for FY 2020-21 and addition to the equity expected during the year based on the normative equity contribution towards the projected capitalization in FY 2021-22. For KLPTS-3 the opening equity in FY 2020-21 is reduced in proposition to GFA.

TABLE 20 : RETURN ON EQUITY FOR FY 2021-22 (Rs. in Crores)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	23.93
2	Gandhinagar (3-4)	25.32
3	Gandhinagar 5*	28.67
4	Wanakbori 1-6 TPS	96.28
5	Wanakbori 7 TPS*	26.43
6	Sikka Extn. (3-4)*	138.05
7	KLTPS 3	36.12
8	KLTPS 4	29.65
9	BLTPS*	154.36
10	Dhuvaran CCPP 1*	10.47
11	Dhuvaran CCPP 2	14.53
12	Dhuvaran CCPP 3*	67.01
13	Utran Extension*	57.53
14	Ukai 6*	126.57
15	Wanakbori 8 TPS*	184.95
16	Ukai Hydro	10.82
17	Kadana Hydro	28.98

* PPA governed stations

5.8. O&M EXPENSES FOR THE FY 2021-22

- 5.8.1. Operation & Maintenance expenses have been calculated by escalating the approved O&M of FY 2020-21 by the Hon'ble Commission in Case No 1619 of 2016.
- 5.8.2. The escalation factor considered to arrive at O&M of FY 2021-22 is 5.72% same as considered by the Hon'ble Commission in MYT Regulations, 2016.
- 5.8.3. In line with the above, the O&M expense for the FY 2021-22 is as mentioned below:

TABLE 21 : O&M EXPENSES FOR FY 2021-22 (RS. IN CRORE)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	194.62
2	Gandhinagar (3-4)	108.25
3	Gandhinagar 5*	27.58
4	Wanakbori 1-6 TPS	283.23
5	Wanakbori 7 TPS*	22.89
6	Sikka Extn. (3-4)*	119.36
7	KLTPS 3	47.32
8	KLTPS 4	23.24
9	BLTPS*	178.24
10	Dhuvaran CCPP 1*	39.53
11	Dhuvaran CCPP 2	39.62
12	Dhuvaran CCPP 3*	82.30
13	Utran Extension*	65.58
14	Ukai 6*	119.36
15	Wanakbori 8 TPS*	162.32
16	Ukai Hydro	23.88
17	Kadana Hydro	28.76

* PPA governed stations

5.9. INTEREST ON WORKING CAPITAL FOR THE FY 2021-22

- 5.9.1. The interest on working capital is worked out on normative basis and is based on norms specified under the GERC Multi-year tariff Regulations, 2016 issued by the Hon'ble Commission.
- 5.9.2. Interest rate for computation of working capital has been considered in line with the GERC (Multi-year tariff) regulation, 2016. The interest rate for the period has been determined as 10.25% as per the above mentioned provisions.
- 5.9.3. The proposed interest on working capital for the control period is as shown below.

TABLE 22 : INTEREST ON WORKING CAPITAL FOR FY 2021-22 (RS. IN CRORE)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	36.21
2	Gandhinagar (3-4)	28.61
3	Gandhinagar 5*	13.62
4	Wanakbori 1-6 TPS	81.24
5	Wanakbori 7 TPS*	12.99
6	Sikka Extn. (3-4)*	35.11
7	KLTPS 3	4.96
8	KLTPS 4	4.27
9	BLTPS*	30.16
10	Dhuvaran CCPP 1*	5.22
11	Dhuvaran CCPP 2	5.85
12	Dhuvaran CCPP 3*	21.39
13	Utran Extension*	20.68
14	Ukai 6*	32.55
15	Wanakbori 8 TPS*	53.33
16	Ukai Hydro	0.75
17	Kadana Hydro	1.15

* PPA governed stations

5.9.4. GSECL request the Hon'ble Commission to approve Interest on Working Capital tabulated above.

5.10. SLDC FEES & CHARGES FOR THE FY 2021-22

5.10.1. GSECL has projected the SLDC fees & charges plant wise for the FY 2021-22 same as actual incurred in FY 2019-20. The SLDC charges for KLTPS-3 considers actual incurred in FY 2019-20 (on pro-rata basis to capacity).

5.10.2. The SLDC fees & charges for FY 2021-22 is as mentioned in the table below:

TABLE 23 : SLDC FEES & CHARGES FOR FY 2021-22 (RS. IN CRORE)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	0.38
2	Gandhinagar (3-4)	0.26
3	Gandhinagar 5*	0.13
4	Wanakbori 1-6 TPS	0.78
5	Wanakbori 7 TPS*	0.13
6	Sikka Extn. (3-4)*	0.31
7	KLTPS 3	0.05
8	KLTPS 4	0.05
9	BLTPS*	0.32
10	Dhuvaran CCPP 1*	0.07
11	Dhuvaran CCPP 2	0.07
12	Dhuvaran CCPP 3*	0.23
13	Utran Extension*	0.23
14	Ukai 6*	0.31
15	Wanakbori 8 TPS*	0.03
16	Ukai Hydro	0.19
17	Kadana Hydro	0.15

* PPA governed stations

5.11. TAX FOR THE FY 2021-22

5.11.1. In line with the provisions of GERC MYT Regulations, 2016, GSECL has considered the tax for the period FY 2021-22 same as the tax expense incurred during the FY 2019-20. The Tax for KLTPS-3 considers actual incurred in FY 2019-20 (on pro-rata basis to capacity).

TABLE 24 : TAX FOR FY 2021-22 (Rs. Crores)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	3.46
2	Gandhinagar (3-4)	2.38
3	Gandhinagar 5*	1.19
4	Wanakbori 1-6 TPS	7.14
5	Wanakbori 7 TPS*	1.19
6	Sikka Extn. (3-4)*	2.83
7	KLTPS 3	0.42
8	KLTPS 4	0.42
9	BLTPS*	-
10	Dhuvaran CCPP 1*	0.60
11	Dhuvaran CCPP 2	0.64
12	Dhuvaran CCPP 3*	2.13
13	Utran Extension*	2.12
14	Ukai 6*	2.83
15	Wanakbori 8 TPS*	-
16	Ukai Hydro	1.73
17	Kadana Hydro	1.37

* PPA governed stations

5.12. INCENTIVE FOR THE FY 2021-22

5.12.1. Incentives corresponding to the plant load factor exceeding the approved target plant load factor shall be billed separately at prevailing rate.

5.13. NON-TARIFF INCOME FOR THE FY 2021-22

5.13.1. Non-tariff income has been computed based on the indicative heads mentioned in the GERC Multi-Year Tariff Regulations, 2016. Non-tariff has been considered same as of FY 2019-20. The Non-Tariff Income for KLTPS-3 considers actual incurred in FY 2019-20 (on pro-rata basis to capacity).

5.13.2. The non-tariff income projection for the FY 2021-22 is mentioned below:

TABLE 25 : NON-TARIFF INCOME FOR FY 2021-22 (Rs. CRORE)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	33.46
2	Gandhinagar (3-4)	10.18
3	Gandhinagar 5*	9.96
4	Wanakbori 1-6 TPS	43.02
5	Wanakbori 7 TPS*	14.44
6	Sikka Extn. (3-4)*	5.17
7	KLTPS 3	2.48
8	KLTPS 4	4.51
9	BLTPS*	14.84
10	Dhuvaran CCPP 1*	0.73
11	Dhuvaran CCPP 2	0.73
12	Dhuvaran CCPP 3*	0.95
13	Utran Extension*	0.47
14	Ukai 6*	15.43
15	Wanakbori 8 TPS*	0.40
16	Ukai Hydro	0.15
17	Kadana Hydro	0.39

* PPA governed stations

**5.14. WATER CHARGES FOR THE FY 2021-22**

5.14.1. GSECL has computed the water charges for the FY 2021-22 as same as actual water charges for FY 2019-20. The water charges for KLTPS-3 considers actual incurred in FY 2019-20 (on pro-rata basis to capacity).

5.14.2. Water charges proposed for the FY 2021-22 is as mentioned below:

TABLE 26 : WATER CHARGES FOR FY 2021-22 (RS. CRORE)

Sr.No	Plant	FY 2021-22
1	Ukai (3-5)	-
2	Gandhinagar (3-4)	42.10
3	Gandhinagar 5*	21.05
4	Wanakbori 1-6 TPS	38.46
5	Wanakbori 7 TPS*	10.17
6	Sikka Extn. (3-4)*	5.11
7	KLTPS 3	0.09
8	KLTPS 4	0.15
9	BLTPS*	6.32
10	Dhuvaran CCPP 1*	0.19
11	Dhuvaran CCPP 2	0.20
12	Dhuvaran CCPP 3*	0.66
13	Utran Extension*	2.40
14	Ukai 6*	-
15	Wanakbori 8 TPS*	5.95
16	Ukai Hydro	-
17	Kadana Hydro	-

* PPA governed stations

5.15. TOTAL FIXED COSTS FOR THE FY 2021-22

5.15.1. Based on above discussed expenses, the tables given below summarize total fixed cost projected for FY 2021-22.

TABLE 27 : TOTAL FIXED COST FOR FY 2021-22 (RS. CRORE)

Sr. No.	Power Station	Depreciation	Interest & Finance Charges	Return on Equity	Interest on Working Capital	O&M Expenses	Tax	SLDC Fees & Charges	Water Charges	Total Fixed Cost	Less: Non-Tariff Income	Net Fixed Charges
1	Ukai (3-5)	44.15	0.60	23.93	36.21	194.62	3.46	0.38	-	303.34	33.46	269.88
2	Gandhinagar (3-4)	34.41	0.69	25.32	28.61	108.25	2.38	0.26	42.10	242.00	10.18	231.82
3	Gandhinagar 5*	2.16	-	28.67	13.62	27.58	1.19	0.13	21.05	94.41	9.96	84.45
4	Wanakbori 1-6 TPS	96.47	19.31	96.28	81.24	283.23	7.14	0.78	38.46	622.91	43.02	579.89
5	Wanakbori 7 TPS*	2.18	0.13	26.43	12.99	22.89	1.19	0.13	10.17	76.10	14.44	61.66
6	Sikka Extn. (3-4)*	173.55	106.95	138.05	35.11	119.36	2.83	0.31	5.11	581.28	5.17	576.11
7	KLTPS 3	29.62	0.34	36.12	4.96	47.32	0.42	0.05	0.09	118.92	2.48	116.44
8	KLTPS 4	36.35	4.92	29.65	4.27	23.24	0.42	0.05	0.15	99.04	4.51	94.53
9	BLTPS*	194.05	121.61	154.36	30.16	178.24	-	0.32	6.32	685.05	14.84	670.21
10	Dhuvaran CAPP 1*	9.74	0.01	10.47	5.22	39.53	0.60	0.07	0.19	65.82	0.73	65.10
11	Dhuvaran CAPP 2	13.03	1.95	14.53	5.85	39.62	0.64	0.07	0.20	75.90	0.73	75.17
12	Dhuvaran CAPP 3*	78.77	52.55	67.01	21.39	82.30	2.13	0.23	0.66	305.06	0.95	304.11
13	Utran Extension*	68.26	21.21	57.53	20.68	65.58	2.12	0.23	2.40	238.01	0.47	237.53
14	Ukai 6*	156.83	72.56	126.57	32.55	119.36	2.83	0.31	-	511.02	15.43	495.59
15	Wanakbori 8 TPS*	211.62	220.12	184.95	53.33	162.32	-	0.03	5.95	838.32	0.40	837.91
16	Ukai Hydro	2.37	1.95	10.82	0.75	23.88	1.73	0.19	-	41.69	0.15	41.54
17	Kadana Hydro	5.50	0.15	28.98	1.15	28.76	1.37	0.15	-	66.05	0.39	65.66
	Total	1,159.06	625.06	1,059.65	388.08	1,566.09	30.47	3.69	132.84	4,964.93	157.32	4,807.61

* PPA governed stations

5.16. ENERGY CHARGES FOR THE FY 2021-22

5.16.1. Based on above proposed operating & fuel related parameters, GSECL proposes per unit Tariff for FY 2021-22 as follows:

TABLE 28 : ENERGY CHARGES FOR FY 2021-22

Sl. No:	Power Station	FY 2021-22
		Rs/KWh
1	Ukai (3-5)	3.73
2	Gandhinagar (3-4)	4.09
3	Gandhinagar 5*	3.97
4	Wanakbori 1-6 TPS	3.93
5	Wanakbori 7 TPS*	3.84
6	Sikka Extn. (3-4)*	3.58
7	KLTPS 3	2.77
8	KLTPS 4	2.56
9	BLTPS*	2.88
10	Dhuvaran CCPP 1*	3.03
11	Dhuvaran CCPP 2	3.22
12	Dhuvaran CCPP 3*	3.57
13	Utran Extension*	3.64
14	Ukai 6*	3.26
15	Wanakbori 8 TPS*	3.36
16	Ukai Hydro	0.00
17	Kadana Hydro	0.00

* PPA governed stations

5.16.2. The Petitioner humbly requests the Hon'ble Commission to approve the revenue requirement, operating parameters and financial parameters for FY 2021-22 as proposed above without any disallowance and all parameters of PPA governed stations will be as per their respective PPAs.

SECTION 6. TARIFF FOR FY 2021-22

6.1.1. In accordance with provisions of the GERC MYT Regulations, 2016 as mentioned above, fixed cost and energy charges for FY 2021-22 is determined as follows:

TABLE 29: ENERGY CHARGES FOR FY 2021-22

Sl. No:	Power Station	FY 2021-22
		Rs/KWh
1	Ukai (3-5)	3.73
2	Gandhinagar (3-4)	4.09
3	Gandhinagar 5*	3.97
4	Wanakbori 1-6 TPS	3.93
5	Wanakbori 7 TPS*	3.84
6	Sikka Extn. (3-4)*	3.58
7	KLTPS 3	2.77
8	KLTPS 4	2.56
9	BLTPS*	2.88
10	Dhuvaran CCPP 1*	3.03
11	Dhuvaran CCPP 2	3.22
12	Dhuvaran CCPP 3*	3.57
13	Utran Extension*	3.64
14	Ukai 6*	3.26
15	Wanakbori 8 TPS*	3.36
16	Ukai Hydro	0.00
17	Kadana Hydro	0.00

* PPA governed stations

6.1.2. In accordance with provisions of the GERC MYT Regulations, 2016 as mentioned above, fixed cost and energy charges for FY 2021-22 is determined as follows:



TABLE 30: FIXED COSTS FOR FY 2021-22 (RS. CRORE)

Sr. No.	Power Station	Depreciation	Interest & Finance Charges	Return on Equity	Interest on Working Capital	O&M Expenses	Tax	SLDC Fees & Charges	Water Charges	Total Fixed Cost	Less: Non-Tariff Income	Net Fixed Charges
1	Ukai (3-5)	44.15	0.60	23.93	36.21	194.62	3.46	0.38	-	303.34	33.46	269.88
2	Gandhinagar (3-4)	34.41	0.69	25.32	28.61	108.25	2.38	0.26	42.10	242.00	10.18	231.82
3	Gandhinagar 5*	2.16	-	28.67	13.62	27.58	1.19	0.13	21.05	94.41	9.96	84.45
4	Wanakbori 1-6 TPS	96.47	19.31	96.28	81.24	283.23	7.14	0.78	38.46	622.91	43.02	579.89
5	Wanakbori 7 TPS*	2.18	0.13	26.43	12.99	22.89	1.19	0.13	10.17	76.10	14.44	61.66
6	Sikka Extn. (3-4)*	173.55	106.95	138.05	35.11	119.36	2.83	0.31	5.11	581.28	5.17	576.11
7	KLTPS 3	29.62	0.34	36.12	4.96	47.32	0.42	0.05	0.09	118.92	2.48	116.44
8	KLTPS 4	36.35	4.92	29.65	4.27	23.24	0.42	0.05	0.15	99.04	4.51	94.53
9	BLTPS*	194.05	121.61	154.36	30.16	178.24	-	0.32	6.32	685.05	14.84	670.21
10	Dhuvaran CAPP 1*	9.74	0.01	10.47	5.22	39.53	0.60	0.07	0.19	65.82	0.73	65.10
11	Dhuvaran CAPP 2	13.03	1.95	14.53	5.85	39.62	0.64	0.07	0.20	75.90	0.73	75.17
12	Dhuvaran CAPP 3*	78.77	52.55	67.01	21.39	82.30	2.13	0.23	0.66	305.06	0.95	304.11
13	Utran Extension*	68.26	21.21	57.53	20.68	65.58	2.12	0.23	2.40	238.01	0.47	237.53
14	Ukai 6*	156.83	72.56	126.57	32.55	119.36	2.83	0.31	-	511.02	15.43	495.59
15	Wanakbori 8 TPS*	211.62	220.12	184.95	53.33	162.32	-	0.03	5.95	838.32	0.40	837.91
16	Ukai Hydro	2.37	1.95	10.82	0.75	23.88	1.73	0.19	-	41.69	0.15	41.54
17	Kadana Hydro	5.50	0.15	28.98	1.15	28.76	1.37	0.15	-	66.05	0.39	65.66
	Total	1,159.06	625.06	1,059.65	388.08	1,566.09	30.47	3.69	132.84	4,964.93	157.32	4,807.61

* PPA governed stations

6.1.3. The Total Fixed charges after net entitlement and Gap/(Surplus) of FY 2019-20 is as mentioned below:

TABLE 31: TOTAL FIXED COSTS OF FY 2021-22 AFTER GAP/(SURPLUS) OF FY 2019-20 (RS. CRORE)

Sl. No:	Power Station	Fixed Cost for FY 2021-22	Net entitlement and gap/(surplus) for FY 19-20	Total Fixed Cost for FY 2021-22
1	Ukai (3-5)	269.88	72.80	342.68
2	Gandhinagar (3-4)	231.82	(29.30)	202.52
3	Gandhinagar 5*	84.45	-	84.45
4	Wanakbori 1-6 TPS	579.89	33.12	613.01
5	Wanakbori 7 TPS*	61.66	-	61.66
6	Sikka Extn. (3-4)*	576.11	-	576.11
7	KLTPS 3	116.44	24.36	140.80
8	KLTPS 4	94.53	0.60	95.13
9	BLTPS*	670.21	-	670.21
10	Dhuvaran CCPP 1*	65.10	-	65.10
11	Dhuvaran CCPP 2	75.17	9.18	84.35
12	Dhuvaran CCPP 3*	304.11	-	304.11
13	Utran Extension*	237.53	-	237.53
14	Ukai 6*	495.59	-	495.59
15	Wanakbori 8 TPS*	837.91	-	837.91
16	Ukai Hydro	41.54	(2.73)	38.81
17	Kadana Hydro	65.66	9.22	74.88
18	Total	4,807.61	117.24	4,924.85

* PPA governed stations

6.1.4. It is hereby requested to the Hon'ble Commission to approve the fixed charges and energy charges for FY 2021-22 as mentioned above.



SECTION 7. PRAYER

GSECL respectfully prays to the Hon'ble Commission;

- 7.1.1. To admit this petition for Determination of Aggregate Revenue Requirement and Tariff for FY 2021-22 as an addendum to True up Petition for FY 2019-20 already filed to the Hon'ble Commission.
- 7.1.2. 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 2021-22 for recovery of variable cost.
- 7.1.3. To approve Aggregate Revenue Requirement and Tariff for FY 2021-22.
- 7.1.4. To grant any other relief as the Hon'ble Commission may consider appropriate.
- 7.1.5. 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.
- 7.1.6. 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

Dated: 04.01.2021

Place: Vadodara

Declaration:

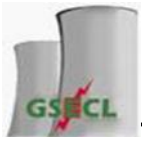
Declaration that the subject matter of the petition has not been raised by the petitioner before any other competent forum, and that no other competent forum is currently seized of the matter or has passed any orders in relation thereto.

Place: 04.01.2021

Date: Vadodara

Signature of the Petitioner

GUJARAT STATE ELECTRICITY CORPORATION LIMITED

**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**

Filing No. _____

Case No. 1908/2020

IN THE MATTER OF	Filing of Petition Determination of Aggregate Revenue Requirement and tariff for FY 2021-22 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 54 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 4th day of January 2021, 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: 04.01.2021

Section 8. Annexure – I: Tariff Filing Formats**INDEX**

Sr. No	Power Station	Page No.
1.	Ukai (3-5)	386-398
2.	Gandhinagar (3-4)	399-411
3.	Gandhinagar 5*	412-424
4.	Wanakbori 1-6 TPS	425-437
5.	Wanakbori 7*	438-450
6.	Sikka Extension (3-4)*	451-463
7.	KLTPS 1-3	464-476
8.	KLTPS 4	477-489
9.	BLTPS*	490-502
10.	Dhuvaran (Gas 1)*	503-515
11.	Dhuvaran (Gas 2)	516-528
12.	Dhuvaran CCPP (Gas 3)*	529-541
13.	Utran Extension*	542-554
14.	Ukai 6*	555-567
15.	Wanakbori 8*	568-580
16.	Ukai Hydro	581-593
17.	Kadana Hydro	594-606

Note: The forms which are not applicable are excluded