

Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation

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NOTE:

- (1) Electronic copy in the form of CD containing excel sheets of the Forms shall also be furnished.
- (2) Figures in (-ve) must be shown in Brackets- (...) and figures in (+ve) must be shown without Bracket.

Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 1: Aggregate Revenue Requirement - Summary Sheet

Sr. No.	Particulars	Reference	FY 2021-22	Remarks
			Projections	
1	Fuel Related Expenses		1,032.43	
2	Operation & Maintenance Expenses	Form 3	119.36	
2.1	Water Charges	Form 3.A & 3.A.1	-	
3	Depreciation	Form 5	156.83	
4	Interest Expenses / Interest & Finance Charges on Loan Capital	Form 6	72.56	
5	Interest on Working Capital	Form 2.4	32.55	
6	Special allowance in lieu of Renovation & Modernisation*			
7	SLDC Fees and Charges		0.31	
8	Total Revenue Expenditure		1,414.05	
9	Add: Return on Equity	Form 7	126.57	
10	Add: Income Tax		2.83	
11	Less: Non-Tariff Income	Form 8	15.43	
12	Aggregate Revenue Requirement		1,528.03	

Note: * - Wherever applicable

Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 1.1: Summary of Tariff Proposal

Sr. No.	Particulars	FY 2021-22	Remarks
		Projections	
1	Capacity (Fixed) Charges (in Rs. Crore)	495.59	
2	Energy Charge Rate ex-bus (Rs./kWh)	3.26	
a	Station/Unit 1 (pls mention name)...		
b	Station/Unit 2 (pls mention name)...		
c	Station/Unit 3 (pls mention name)...		
		
		
3	Other Charges (Rs./kWh)		
a	Station/Unit 1 (pls mention name)...		
b	Station/Unit 2 (pls mention name)...		
c	Station/Unit 3 (pls mention name)...		
		
		

Gujarat State Electricity Corporation Ltd.
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Form 2.1: Operational Parameters - Thermal Generation
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Sr. No.	Particulars	Unit of Measurement	FY 2021-22	Remarks
			Projections	
1	Total Capacity	MW	500	
2	Availability			
2.1	Target Availability for full recovery of AFC	%		
2.2	Projected Availability	%	85.00%	
3	Plant Load Factor (PLF)			
3.1	Target PLF for Incentive	%		
3.2	Projected PLF	%	77.00%	
4	Gross Generation			
4.1	Scheduled Generation	MU		
4.2	Projected Gross Generation	MU	3372.60	
5	Auxiliary Consumption			
5.1	Normative Auxiliary Energy Consumption	%		
5.2	Projected Auxiliary Energy Consumption	%	6.00%	
5.3	Projected Auxiliary Energy Consumption	MU	202.36	
5.4	Net Generation	MU	3170.24	
6	Gross Station Heat Rate			
6.1	Normative Gross Station Heat Rate	kcal/kWh		
6.2	Projected Gross Station Heat Rate	kcal/kWh	2,385.00	
7	Secondary Fuel Oil Consumption			
7.1	Normative Secondary Fuel Oil Consumption	ml/kWh		
7.2	Projected Secondary Fuel Oil Consumption	ml/kWh	1.00	
8	Lime stone consumption			
	Lignite based stations using CFBC Technology			
8.1	Normative	kg/kWh		
8.2	Projected	kg/kWh	NA	
9	Transit and Handling Loss			
9.1	Normative Transit Loss	%		
9.2	Projected Transit Loss	%	0.80%	
10	Gas Booster Consumption			
10.1	Normative	%		
10.2	Projected	%	NA	

* Figures must be as per norms approved in GERC (MYT) Regulations, 2016

Note: Operational data is to be submitted for each Unit of each station separately

Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 2.2: Energy Charges - Thermal Generation
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Sr. No.	Item	Derivation	Unit	FY 2021-22 (Projections)	Remarks
1	Total Capacity	A1	MW	500	
2	Actual PLF (for True up year)/Projected PLF	A2	%	77.00%	
3	Gross Generation	$A=A1 \times A2 \times 8784$ (leap year or 8760 for non-leap years)	MUs	3,372.60	
4	Auxiliary Consumption	C	%	6.00%	
5	Auxiliary Consumption	B	MUs	202.36	
6	Net Generation	$Y=A - B$	MUs	3,170.24	
7	Station Heat Rate	D	Kcal/KWh	2,385.00	
8	Sp. Oil Consumption	E	ml/kWh	1.00	
9	Gross Calorific Value of Coal	F	kcal/kg	3,829.63	
10	Calorific value of Oil	G	kcal/l	10,479.41	
11	Overall Heat	$H=A \times D$	G Cal	8,043,651.00	
12	Heat from Oil	$I=(A \times E \times G)/1000$	G Cal	35,342.85	
13	Heat from Coal	$J=H-I$	G Cal	8,008,308.15	
14	Transit losses	K	%	0.80%	
15	Coal Blend				
16	A) Indigenous Coal	X1	%	13.06%	
17	B) Washed Coal	X2	%	86.74%	
18	C) Imported Coal	X3	%	0.21%	
19	Actual Oil Consumption	$L=A \times E$	kl	3,372.60	
20	Actual Coal Consumption	$M=(J \times 1000)/F$	MT	2,091,142.01	
21	A) Indigenous Coal	$Q1=M^* \times X1/(1-K)$	MT	275,240.16	
22	B) Washed Coal	$Q2=M^* \times X2 / (1-K)$	MT	1,828,393.58	
23	C) Imported Coal	$Q3=M^* \times X3$	MT	4,337.33	
24	Price of Coal				
25	A) Indigenous Coal	P1	Rs/MT	3,756.21	
26	B) Washed Coal	P2	Rs/MT	4,990.28	
27	C) Imported Coal	P3	Rs/MT	7,757.33	
28	Price of Oil	P4	Rs/kl	39,327.54	
29	Coal cost				
30	A) Indigenous Coal	$N1=Q1 \times P1$	Rs Lakh	10,338.61	
31	B) Washed Coal	$N2=Q2 \times P2$	Rs Lakh	91,242.00	
32	C) Imported Coal	$N3=Q3 \times P3$	Rs Lakh	336.46	
33	Total Coal Cost	$N4=N1+N2+N3$	Rs Lakh	101,917.07	
34	Oil Cost	$N5=P4 \times L/10^5$	Rs Lakh	1,326.36	
35	Other Charges (Please specify details)	N6	Rs Lakh		
36	Other Adjustments (Please specify details)	N7	Rs Lakh		
37	Total Fuel Cost	$O=N4+N5+N6+N7$	Rs Lakh	103,243.43	
38	Fuel Cost/Unit Gross	$P=O/(A \times 10)$	Rs/kWh	3.06	
39	Fuel Cost/Unit Net	$Q=O/(Y \times 10)$	Rs/kWh	3.26	
40	Cost of fuel/G.Cal	$R=(O/H) \times 10^5$	Rs/Gcal	1,283.54	
41	Actual Net Generation (for true up year only)	S	MUs		
42	Normative Fuel Cost for actual Net Generation (for true up year only)	$T=S \times Q/10$	Rs. Crore		

* Should be as per MYT Regulations. If there is any deviation, pls justify.

NOTE: Operational data is to be submitted for each Unit of each station separately

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Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 2.4: Interest on Working Capital - Thermal Generation
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B. FY 2021-22

(Rs. Crore)

Sr. No.	Particulars	Norm	FY 2021-22 (Projections)
1	Target Availability (%)		85.00%
2	Generation (MU)		3372.60
3	Cost of Coal/Lignite ¹		138.71
4	Cost of Oil ²		NA
5	Cost of Secondary Fuel Oil ¹		2.44
6	Fuel Cost ³		NA
7	Liquid Fuel Stock ³		NA
8	O&M expenses		9.95
9	Maintenance Spares		30.22
10	Receivables		136.27
11	Total Working Capital Requirement		317.59
	Computation of Working Capital Interest		
12	Interest Rate (%)		10.25%
13	Interest on Working Capital		32.55

Note:

- 1 For Coal based/Lignite based generating stations
- 2 For Oil based generating stations
- 3 For Gas Turbine/Combined Cycle generating stations taking into account the mode of operation on gas fuel and liquid fuel
- 4 Submit this form for each station separately

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Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 3: Operations and Maintenance Expenses Summary
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(Rs. Crore)

Sr. No.	Particulars	Reference	FY 2021-22 (Projections)	Remarks
1	O&M Expenses	Form 3.1	119.36	
1.1	Employee Expenses	Form 3.2		
1.2	A&G Expenses	Form 3.3		
1.3	R&M Expenses	Form 3.4		
2	Less: O&M Expense capitalised			
3	Total Operation & Maintenance Expenses (Net of Capitalisation)		119.36	

Note: This form should be submitted for each station separately alongwith separate details for H.O. Expenses

Form 3.A.1: Water Charges for the Period FY 2021-22

Sr. No.	Name of Generating Station	Projected Gross Generation in MU	Projected water consumption in Cub.Mtr. per MU	Projected rate of water in Rs./Cub.Mtr	Projected cost of water consumption in Rs. Crore
1	Ukai 6	3372.60			-
...				
...				
...				
...				
...				

Ukai 6**ARR Petition Formats for FY 2021-22 - Generation****Form 3.1: Normative O&M Expenses****Ukai 6****A. For Existing Generating Stations****(Rs. Crore)**

Sr. No.	Particulars	FY 2021-22	
		Normative	Projected
1	Employee Expenses		
2	A&G Expenses (including insurance and excluding Water Charges)		
3	R & M Expenses		
4	Total O&M Expenses	119.36	119.36

Notes: This form should be submitted for each station separately alongwith separate details for H.O. Expenses

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Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 4: Summary of Capital Expenditure and Capitalisation
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(Rs. Crore)

Sr. No.	Particulars	FY 2021-22	Remarks
		Projections	
1	Capital Expenditure	17.33	
2	Capitalisation	17.33	
3	IDC		
4	Capitalisation + IDC	17.33	

Note: Detail Justification shall be provided for variation in approved capital expenditure and capitalisation vis-a-vis actual capital expenditure and capitalisation

This form should be submitted for each station separately

Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 5: Assets & Depreciation (1 of 2)
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Fixed Assets and Depreciation (Station-wise) For FY 2021-22

(Rs. Crore)

Particulars *	Gross Block				Depreciation				Applicable rate of Depreciation (%) *	Net Block	
	As at the beginning of the Financial Year	Additions	Deductions	As at the end of the Financial Year	As at the beginning of the Financial Year	Additions	Deductions	As at the end of the Financial Year		As at the beginning of the Financial Year	As at the end of the Financial Year
Land											
Buildings											
Hydraulic works											
Other Civil Works											
Plant & Machinery											
Lines & Cables											
Vehicles											
Furniture & Fixtures											
Office Equipments											
Capital Expenditure on Assets not belonging to utility											
Spare Units											
Capital Spares											
TOTAL	3004.91	17.33	0.00	3022.24		156.83			5.20%		

* The particular of asset and rate of depreciation should match with those provided in the applicable Tariff Regulations

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Form 6: Interest Expenses

A. Normative Loan

(Rs. Crore)

Sr. No.	Source of Loan	FY 2021-22	Remarks
		Projections	
1	Opening Balance of Normative Loan	951.09	
2	Less: Reduction of Normative Loan due to retirement or replacement of assets		
3	Addition of Normative Loan due to capitalisation during the year	12.13	
4	Repayment of Normative loan during the year	156.83	
5	Closing Balance of Normative Loan	806.39	
6	Average Balance of Normative Loan	878.74	
7	Weighted average Rate of Interest on actual Loans (%)	8.26%	
8	Interest Expenses		
9	Finance Charges	0.00	
10	Total Interest & Finance Charges	72.56	

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ARR Petition Formats for FY 2021-22 - Generation
Form 7: Return on Regulatory Equity

(Rs. Crore)

Sr. No.	Particulars	Legend	FY 2021-22
			Projections
1	Regulatory Equity at the beginning of the year	A	901.47
2	Capitalisation during the year	B	17.33
3	Equity portion of capitalisation during the year	C	5.20
4	Reduction in Equity Capital on account of retirement / replacement of assets	D	-
5	Regulatory Equity at the end of the year	$E=A+C-D$	906.67
	Return on Equity Computation		
6	Return on Regulatory Equity at the beginning of the year	F	
7	Return on Regulatory Equity addition during the year	$G=(C-D)/2$	
8	Total Return on Equity		126.57

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Gujarat State Electricity Corporation Ltd.
ARR Petition Formats for FY 2021-22 - Generation
Form 8: Non-Tariff Income
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(Rs. Crore)

Sr. No.	Particulars	Reference	FY 2021-22	Remarks
			Projections	
1	Income from Rents of land or buildings			
2	Income from Sale of Scrap			
3	Income from statutory investments			
4	Income from sale of ash/rejected coal			
5	Interest income on advances to suppliers/contractors			
6	Income from Rental from staff quarters			
7	Income from Rental from contractors			
8	Income from hire charges from contractors and others			
9	Income from advertisements, etc.			
10	Prior Period Income etc.			
11	...			
12	...			
	Others (Pls. specify)			
17	Total		15.43	

Note: This form should be submitted for each station separately