- 4.6 The Petitioner has compared the actual for FY 2020-21 with the approved figures for FY 2020-21 and has segregated the variation as controllable or uncontrollable based on the analysis in the truing up section.
- 4.7 Any variation on account of uncontrollable factor is a part of the gap identified for the year and is passed on to the consumer through adjustment in tariff as per the Regulation 23 of the GERC (Multi Year Tariff) Regulations, 2016. However, in case of variation due to controllable factors, the gains and losses have to be dealt with as per Regulation 24.
- 4.8 The comparison of gains / losses of various ARR items due to controllable and uncontrollable factors have been summarized below:

Table 25: Controllable & uncontrollable variations for FY 2020-21

			FY 202	FY 2020-21		
Particulars	Approved	Actual	Over (+) / Under (-) Recovery	Gain/(Loss) due to Controllable Factor	Gain/(Loss) due to Uncontrollable factor	
Power purchase expenses	162.58	171.30	(8.72)	-	(8.72)	
O & M expenses	11.33	10.39	0.95	-	0.95	
Depreciation	1.99	2.83	(0.84)	-	(0.84)	
Interest on LT loans & Finance Charges	2.14	2.21	(0.07)	-	(0.07)	
Interest on security deposit	0.11	0.12	(0.01)	-	(0.01)	
Interest on working capital	1.65	1.49	0.16	-	0.16	
Bad Debts Written off	-	-	-	-	-	
Contribution to Contingency Reserves	-	-	-	-	-	
Total Revenue Expenditure	179.81	188.34	(8.53)	-	(8.53)	
Return on Equity Capital	3.07	3.05	0.02	-	0.02	
Income Tax	2.77	4.25	(1.48)	-	(1.48)	
Aggregate Revenue Requirement	185.65	195.64	(9.99)	•	(9.99)	
Less: Non-tariff income	2.92	3.44	(0.52)	-	(0.52)	
Aggregate Revenue Requirement	182.73	192.20	(9.47)	•	(9.47)	

- 4.9 As indicated above, the Petitioner has identified all the expenditure heads under controllable and uncontrollable categories. The gains / (losses) arose in the true up for FY 2020-21 for the Petitioner be suitably allowed as pass through in the tariff as per mechanism specified by the Hon'ble Commission.
- 4.10 The variation in the power purchase cost from approved ARR is on account of variation in sales and variation in actual cost. Any variation on account of power procurement cost is treated as uncontrollable.
- 4.11 The variation in O&M expenses are treated as uncontrollable.

- 4.12 The variation in RoE, interest and depreciation on account of variation in capitalization are to be treated as uncontrollable.
- 4.13 Similarly, the variations in non-tariff income have been treated as uncontrollable.
- 4.14 Based on the above, the sharing of gains and losses due to controllable & uncontrollable factors is summarized below.

Table 26: Sharing of gains & losses for FY 2020-21

Particulars	Pass through by adjustment of tariff	To be retained/absorbed	Total
Controllable gain	-	-	-
Uncontrollable gain	(9.47)	-	9.47
Total	(9.47)	•	(9.47)

4.15 As per above table, total loss of Rs. 9.47 Cr. should be treated as pass through to the consumers being uncontrollable loss.

Gap for FY 2020-21

4.16 The following is the summary of trued up ARR of 2020-21 to be recovered by the Petitioner after incorporation of sharing of gains / losses.

Table 27: Trued up ARR for FY 2020-21

(Rs. Cr.)

Particulars in Rs. Crores		Actual for FY 2020-21
ARR approved in the Multi Year Tariff order for FY 2020-21	(a)	182.73
Less : Gains / (losses) on account of controllable factor to be passed on to the consumers (1/3rd)	(b)	-
Less : Gains / (losses) on account of uncontrollable factor to be passed on to the consumers	(c)	(9.47)
ARR trued up of FY 2020-21	d=a-(b+c)	192.20

4.17 The trued up ARR for FY 2020-21 is Rs. 192.20 Cr. after sharing of gains and losses for FY 2020-21 and the revenue from sales of power is Rs. 199.93 Cr. Thus, revenue surplus for FY 2020-21 works out to Rs. 7.73 Cr. as below:

Table 28: Net revenue gap / (surplus) for FY 2020-21

(Rs. Cr.)

SN	Particulars	Approved	Actual
A	Aggregate Revenue Requirement	182.73	192.20
В	Less: Revenue from sale of power	197.94	199.93
С	Net Revenue gap / (surplus) for FY 2020-21	(15.21)	(7.73)

- 4.18 The Petitioner requests Hon'ble Commission to approve revenue gap for FY 2020-21 as mentioned above.
- 4.19 The Hon'ble Commission in its Tariff Order dated 03.04.2020 has approved consolidated revenue gap of Rs. 9.69 Cr. for FY 2018-19 and carrying cost of Rs. 1.15 Cr. for previous year of FY 2016-17 & Rs. 1.63 Cr. on this revenue gap of FY 2018-19 as per GERC (MYT) Regulations, 2016.
- 4.20 In view of above, the consolidated revenue gap for FY 2020-21 is as below:

Table 29: Consolidated Revenue gap for FY 2020-21

Particulars	Approved	Actual
Net Revenue Gap / (Surplus) of FY 2020-21	(15.21)	(7.73)
Add: Approved Consolidated Gap / (Surplus) for FY 2018-19	9.69	9.69
Add: Carrying Cost for FY 2016-17	1.15	1.15
Add: carrying cost on revenue gap of FY 2018-19 for FY 2019-20 & FY 2020-21	1.63	1.63
Consolidated revenue gap / (Surplus) for FY 2020-21	(2.75)	4.74

4.21 The Petitioner submits Hon'ble Commission to approve consolidated revenue gap of Rs. 4.74 Cr. for FY 2020-21.

CHAPTER 5: AGGREGATE REVENUE REQUIREMENT FOR FY 2022-23

Background

- 5.1 The Hon'ble Commission has issued Suo-Motu order on dated 24.09.2021 about applicability of GERC (Multi Year Tariff) Regulations, 2016 to file application / Petition for the determination of Annual ARR for FY 2022-23 and proposal for determination of tariff for FY 2022-23.
- The Petitioner would like to submit that the Petitioner has worked out estimated ARR for FY 2022-23 based on GERC (Multi Year Tariff) Regulations, 2016 vide Suo-Motu order published on dated 24.09.2021 by Hon'ble Commission for determination of tariff for FY 2022-23.
- 5.3 Based on above background, the Petitioner envisages to furnish projection for various parameters of the ARR of FY 2022-23 for the kind consideration of the Hon'ble Commission.

Energy Sale

- 5.4 The Petitioner would like to submit that sales forecast worked out according to demand projection as per actual sales in the past years and current market scenario in the SEZ area.
- 5.5 The license area of Petitioner is being developed for setting up an industrial hub by the Developer of Mundra SEZ. The Mundra SEZ is still in the development phase as the new industries and associated infrastructure is likely to come up gradually and based on overall economic conditions. Hence, it would be very difficult to carry out the Demand and Sales projection more accurately and precisely for this area.
- The Petitioner has considered the projections given by industrial & commercial units, already established in the SEZ area. These projections are based on the details captured from respective consumers. The Petitioner has taken good care to work out close to realistic projections of energy sales and also collected inputs from developer of Mundra SEZ for the same. The sales projections for FY 2022-23 are as follow:

Table 30: Energy Sales for FY 2022-23

(In MUs)

Particulars	FY 2022-23
HT Category	
HTMD-I (Commercial)	161.81
HTMD-I (Industrial)	350.21
HTMD-II	18.92
HTMD-III	4.97
HTMD-IV	1.58
HTMD-EV Charging Station	-
Traction	20.64
Low Voltage Category	
Residential	-

Commercial (Non Demand)	-
Commercial (Demand)	3.09
Industrial (Non Demand)	-
Industrial (Demand)	0.06
Street Lights	0.41
Temporary	-
LT-EV Charging Stations	-
Total Sale	561.69

Projection of number of consumers

- 5.7 The consumer category mainly served by the Petitioner in Mundra SEZ area would be predominantly industrial and commercial bulk consumers of HTMD-I category. The consumer base of other categories is likely to be negligible.
- 5.8 Based on inputs collected from developer of Mundra SEZ about prospective clients and details of plots allotted so far in Mundra SEZ area, the projections of consumer have been worked out. The summery is as below:

Table 31: Projections of Consumer for FY 2022-23

(In Nos.)

Particulars	FY 2022-23
HT Category	
HTMD-I (Commercial)	21
HTMD-I (Industrial)	23
HTMD-II	2
HTMD-III	1
HTMD-IV	2
HTMD-EV Charging Station	-
Traction	1
Low Voltage Category	
Residential	-
Commercial (Non Demand)	-
Commercial (Demand)	29
Industrial (Non Demand)	-
Industrial (Demand)	1
Street Lights	8
Temporary	-
LT-EV Charging Stations	-
Total Consumer	88

Distribution Losses

- 5.9 The Petitioner has projected distribution losses of 3.50% for the FY 2022-23 considering addition of basic infrastructure.
- 5.10 The Petitioner has created basic infrastructure to provide power connectivity to its consumers in SEZ area. The Petitioner has considered N-1 transformation redundancy at all level for higher power reliability and availability to end

- consumers in the Zone as specified in Distribution Code, therefore, may vary from the above projection. Therefore, the Petitioner requests Hon'ble Commission to approve actual losses at the time of true-up.
- 5.11 In view of above, Petitioner request Hon'ble Commission to allow projected distribution losses for FY 2022-23 as shown in table below:

Table 32: Projections of Distribution Losses for FY 2022-23

(In %)

Particulars	FY 2022-23
Distribution Loss	3.50%

Energy Balance

- 5.12 The projection of Energy Balance for the FY 2022-23 is based on projection of Energy Sales and projected distribution & transmission losses.
- 5.13 Since, Petitioner is directly connected with grid by APMuL bus through dedicated transmission line, the transmission losses in case of Petitioner are NIL for present LTPPA with APMuL. In case LTPPA with UPCL, the delivery of power is at Petitioner's bus and therefore, no transmission losses have been considered.
- 5.14 The Petitioner has considered procurement of power through short term arrangement to cater the demand over and above LTPPA and therefore, transmission losses have been considered.
- 5.15 The renewable power requirement to fulfill Non-Solar RPO, the Petitioner has LTPPA with AREKAL. The WTGs under LTPPA with AREKAL are directly connected with the distribution network of the Petitioner and therefore, no transmission losses have been considered. However, the Petitioner has considered procurement of Non-Solar energy through IEX for shortfall RPO and therefore, applicable transmission losses have been considered.
- 5.16 The renewable power requirement to fulfill Solar RPO, the Petitioner has considered to use renewable attribute of Solar Projects for captive consumption of its consumers and procurement of solar energy through IEX for shortfall RPO and therefore, applicable transmission losses have been considered.
- 5.17 The estimated energy sales, losses and energy balance for the FY 2022-23 as projected by Petitioner are as below:

Table 33: Summary of Energy Balance for FY 2022-23

Particulars	FY 2022-23
Estimated Energy Sale	561.69
Distribution Losses (%)	3.50%
Distribution Losses (MUs)	20.37
Energy Requirement after Distribution Losses (MUs)	582.06
Transmission Losses (%)	2.05%
Transmission Losses (MUs)	12.17
Total Energy required after T&D Losses (MUs)	594.23

Power Purchase Cost

- 5.18 The Petitioner has projected power requirement, which shall be procured for retail supply business during FY 2022-23. The quantum of power procurement has been worked out based on projected sale of power to its customers and projected T&D losses.
- 5.19 The Petitioner has considered the source-wise energy procurement based on estimated sales during FY 2022-23. The estimated source-wise energy procurement is as below:

Table 34: Source-wise Energy Procurement for FY 2022-23

(In MUs)

	(iii iiii d
Particulars	FY 2022-23
Long Term Contract	361.77
Bilateral & others	146.77
RPO – Solar	33.10
RPO – Wind	48.22
RPO – Others	4.37
Net Energy	594.23

- 5.20 The Petitioner has considered procurement of power through its Thermal LTPPAs and Wind LTPPA for FY 2022-23.
- 5.21 The Petitioner has not considered additional purchase of power under long / medium term arrangement which may lead to burden the consumer in future, if the projected demand will not met or get reduced. Therefore, considering the consumer interest, the Petitioner will meet additional power requirement under short term arrangement till the time demand is not stabilized.
- The Petitioner has considered solar power from its captive solar rooftop plants. The Petitioner is also using the solar attributes of its consumers, who have installed captive solar rooftop plants to meet the solar RPO. The Petitioner has also considered purchase of solar power from green market through Indian Energy Exchange (IEX) to fulfil its RPO.
- 5.23 The Petitioner has considered purchase of aforesaid renewable power in accordance with the RPO target for FY 2021-22 notified by Hon'ble Commission through its GERC (Procurement of Energy from Renewable Sources) (Second Amendment) Regulations, 2018 as there is no notification by Hon'ble Commission for FY 2022-23. However, the Petitioner submits that the actual cost of RPO will be considered during Truing-up.
- 5.24 The summary of estimated source-wise power purchase cost during FY 2022-23 is as below:

Table 35: Source-wise Power Purchase for FY 2022-23

(Rs. Cr.)

	(N3, O1,)
Particulars	FY 2022-23
Long Term Contract	166.64
Bilateral & others	49.97

RPO – Solar	12.02
RPO – Wind	16.77
RPO – Others	3.09
Other (Reactive, SLDC & Transmission Charges, etc.)	16.72
Total	265.20

Operation and Maintenance (O&M) Expenses

- 5.25 The average of actual O&M expenses for FY 2018-19 to FY 2020-21 has been considered as the O&M expenses for the FY 2019-20 ending 31st March, 2020 with escalation of 5.72% year on year to derive at the allowable O&M expenses for FY 2022-23 in line with the provision of the Regulation 86.2 of GERC (MYT) Regulations, 2016.
- 5.26 Since license area of the Petitioner is still in the development phase as the new industries and associated infrastructure is likely to come up gradually and also the license area falls in the saline atmosphere, therefore actual O&M expenses may vary from the above projections. Therefore, the Petitioner requests Hon'ble Commission to approve the actual O&M expenses at the time of True-up.
- 5.27 The estimated O&M costs for FY 2022-23 have been tabulated below:

Table 36: O&M Costs for FY 2022-23

(Rs. Cr.)

Particulars	FY 2022-23
Employee Expenses	3.30
R&M Expenses	1.72
A&G Expenses	6.40
Total O&M Expenses	11.41

Capital Expenditure, Capitalization and Source of Funding

- 5.28 The availability of qualitative and reliable power supply to the unit holders is the most important element for successful development of Mundra SEZ. The Investors prefer to set up their continuous process industry in SEZ area, if they get uninterrupted quality power supply.
- 5.29 In view of above, the Petitioner has planned to established state of art distribution network along with built-in redundancies to ensure uninterrupted quality power supply to the unit holders in Mundra SEZ.
- 5.30 The Petitioner has endeavored its best to estimate CAPEX for FY 2022-23 based on principals set in Distribution Code.
- 5.31 The Petitioner has considered following assumptions for CAPEX.
 - The hybrid i.e. combination of overhead line and underground cable has been considered for EHV network at 66 KV level.
 - o The indoor type sub-station has been considered for HV S/s of 11 KV Level.
 - o The underground cables have been considered for HV and LV Network.

- The EHV network is optimally ready to serve any new consumers to cater power supply in SEZ area.
- The HV/LV network is being laid on need basis for last mile connectivity.
- The costs of material and services have been considered as per existing rates (without any taxes and duties), no escalation factor has been considered.
- The CAPEX is proposed to be funded with a debt / equity ratio of 70:30.
- 5.32 The Petitioner has planned to undertake capital investments for development of power distribution infrastructure to meet power requirement of its consumers.
- 5.33 The Petitioner has projected addition of few retail consumer during FY 2022-23 and it is expected that consumer base would reach to 88 nos. with arithmetic sum of contract demand up to 136 MVA.
- 5.34 The Petitioner has considered conversion of radial feed in to Ring Network at HT level for better reliability to industrial units and solar injections installed by the consumers.
- 5.35 The Petitioner has considered augmentation of 66 KV Network between MRSS MITAP S/s considering power demand and providing better reliability to the consumers which are continuous process industry.
- 5.36 The Petitioner has considered EHV substation along with associated EHV Transmission Line to cater the power on eastern side of SEZ at north corridor to fulfil power requirement to prospective industries and Railway Traction.
- 5.37 The Petitioner has considered communicable feeder metering system in view of automated energy accounting and calculation of feeder wise losses.
- 5.38 Based on above the summarized statement of proposed capital expenditure during FY 2022-23 is as below:

Table 37: Capital Expenditure for FY 2022-23

Sn	Particular	FY 2022-23
Α	EHV (220 kV & 66 kV)	
	EHV transmission line	15.96
	EHV transmission cable	21.80
	EHV substation	6.23
	Land cost	4.01
	Civil cost	4.43
	Total	52.44

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В	HT (33 kV & 11 kV) & NETWORK	
	33 kV HT cable network	-
	11 kV HT cable network	1.63
	33 / 11 kV HT substation	-
	Land cost	-
	Civil cost	-
	Total	1.63
С	Others	
	Automation & SCADA	1.07
	Testing and measuring equipment	-
	IT	-
	Meters & AMR	0.23
	Miscellaneous	-
	Buildings & other civil work	-
	Total	1.30
D	Grand Total	55.37

5.39 The Petitioner would like to submit the proposed scheme-wise Capitalization for FY 2022-23 is as below:

Table 38: Proposed Scheme-wise Capitalization for FY 2022-23

(Rs. Cr.)

Sn	Project Code	Project Title	FY 2022-23
1	HT/LT Network	Power Connectivity & common Network for consumers	0.50
2	HT/LT Network	Power Connectivity & common Network for consumers	1.13
3	Others	Communicable Feeder Meter	0.23
4	EHV Network	66 kV Transmission Line	5.72
5	EHV Network	66 kV Transmission Line	32.31
6	EHV Network	66 kV Transmission Line	3.20
7	EHV Substation	66 kV Hybrid Substation	12.28
Total			55.37

5.40 Accordingly, the Petitioner has proposed Capital expenditure & Capitalization for FY 2022-23 is as below:

Table 39: Capital Expenditure and Capitalization for FY 2022-23

(Rs. Cr.)

Particulars	FY 2022-23
Capital Expenditure	55.37
Capitalization	55.37

5.41 The Petitioner has proposed to fund the Capitalization for FY 2022-23 from recovery of SLC and balance through normative debt / equity in the ratio of 70:30. The funding of capitalization as projected by the Petitioner is as below:

Table 40: Funding of Capitalization for FY 2022-23

Particular	FY 2022-23
Opening GFA	140.93
Addition to GFA	55.37
Deletion from GFA	-
Closing GFA	196.30
SLC Contribution	21.36
Capitalization for Debt:Equity	34.01
Normative Debt (70%)	23.81
Normative Equity (30%)	10.20

Depreciation

- 5.42 The Petitioner has computed depreciation on the fixed assets based on Straight Line Method as prescribed in GERC (Multi Year Tariff) Regulations, 2016.
- 5.43 The depreciation of the Gross Fixed Assets based on above, works out to be as below:

Table 41: Depreciation for FY 2022-23

(Rs. Cr.)

	(1.0.01.7
Particulars	FY 2022-23
Opening Gross Block	140.93
Closing Gross block	196.30
Depreciation	4.96

Interest and Finance Expenses

- 5.44 The interest costs have been estimated under the following three heads for FY 2022-23:
 - o Interest on Debt
 - o Interest on Security Deposit
 - o Interest on Working Capital

Interest on Debt / Loan

- 5.45 The Petitioner has considered the debt-equity in 70:30 ratio indicated in GERC (Multi Year Tariff) Regulations, 2016 excluding unutilized / recovered Service Line Contribution (SLC).
- The Petitioner has calculated interest expense on the basis of actual weighted average interest rate charged by the bank for past loan as per GERC (Multi Year Tariff) Regulations, 2016. The Petitioner had paid the interest amount to the bank at weighted average interest rate of 11.25% during FY 2019-20 and same has been considered for FY 2022-23 as per GERC (Multi Year Tariff) Regulations, 2016.
- 5.47 The capitalization and borrowings based on these assumptions are summarized as below:

Table 42: Interest on Loan for FY 2022-23

Particulars	FY 2022-23
Opening balance of Normative Loans	22.19
Less: Reduction in Normative Loan	-
Addition of Normative Loan	23.81
Repayment of Normative Loan	4.96
Closing balance of Normative Loan	41.04
Average balance of Normative Loan	31.61
Interest Rate (%)	11.25%
Interest Expenses	3.56
Finance Charges	-
Total Interest & Finance Charges	3.56

Interest on Security Deposit

- 5.48 The consumer whose amount of security exceeds Rs. 25 Lakhs, at his option, furnish the security deposit in the form of irrevocable bank guarantee initially valid for period of 2 years as per GERC (Security Deposit) (Second Amendment) Regulations, 2015.
- 5.49 The contribution to security deposit depends upon the addition of new consumers & their load growth from time to time. The Petitioner has computed the interest expenses on proposed security deposit for FY 2022-23 as per the RBI bank rate of 4.25% on 1st April, 2021 as per GERC (Multi Year Tariff) Regulations, 2016 is as below:

Table 43: Interest Expenses on Security Deposit for FY 2022-23

(Rs. Cr.)

Particulars	FY 2022-23
Amount held as Security deposits	2.02
Interest Rate (%)	4.25%
Interest on Security deposits	0.09

Interest on Working Capital

- 5.50 The interest on working capital has been worked out as per the GERC (Multi Year Tariff) Regulations, 2016. The following aspects have been considered for determining bases for working capital in a year.
 - Operation & Maintenance expenses for one month, plus maintenance spare
 1 % of GFA, plus receivables equivalent to one month of the expected revenue, minus
 - Amount, if any, held as security deposits against bill payment
- 5.51 The petitioner has considered interest on working capital at weighted average 1 year SBI Marginal Cost of Funds Based Lending Rate (MCLR) for FY 2020-21 plus 250 basis points as per GERC (Multi Year Tariff)

Regulations, 2016 and accordingly, interest on working capital has been considered @ 9.57% (7.07+2.50) for FY 2022-23 is as below:

Table 44: Interest on Working Capital for FY 2022-23

(Rs. Cr.)

Particulars	FY 2022-23
O&M Expense	0.95
Maintenance Spares	1.41
Receivables	24.75
Working Capital Requirement	27.11
Less: Average Security Deposit from Customers	2.02
Total Working Capital	25.09
Interest Rate (%)	9.57%
Interest on working Capital	2.40

Return on Equity

- 5.52 The Petitioner has considered projected paid up equity capital with 70:30 debt / equity ratio on the asset put to use as per draft GERC (Multi Year Tariff) Regulations, 2016.
- 5.53 The Petitioner has considered a regulated return of 14% as per draft GERC (Multi Year Tariff) Regulations, 2016.

Table 45: Return on Equity for FY 2022-23

(Rs. Cr.)

Particulars	FY 2022-23
Regulatory Equity at the Beginning of the Year	24.76
Equity portion of Capitalization during the Year	10.20
Regulatory Equity at the end of the Year	34.96
Average Equity	29.86
Rate of RoE	14%
Total Return on Equity	4.18

Contingency Reserves

5.54 The Petitioner has not considered any contingency reserve for the FY 2022-23 as below:

Table 46: Contingency Reserve for FY 2022-23

(Rs. Cr.)

Particulars	FY 2022-23
Contingency Reserve	-

Income Tax

5.55 The Petitioner has paid Rs. 4.25 Cr. as income tax for FY 2020-21, therefore, it has been considered as projected income tax during FY 2022-23 as below: