

# चंडीगढ़ इंटरनेशनल एयरपोर्ट लिमिटेड Chandigarh International Airport Limited

No.: CHIAL/SEC/MYTP/2021-26/12

Date: 21.01.2021

To,

The Chairman,  
Airports Economic Regulatory Authority of India,  
AERA Building, Administrative Complex,  
Safdarjung Airport, New Delhi - 110003

**Subject: Proposal for submission of Multi Year Tariff Proposal (MYTP) for Second Control Period of Chandigarh International Airport Limited (CHIAL)**

Sir,

Chandigarh International Airport Limited, (CHIAL) was incorporated in 2010 as a company under the Companies Act, 2013 to build and operate a new terminal of international standards at the Chandigarh Airport. It is a joint venture of the Airports Authority of India (AAI), Punjab Government through Greater Mohali Area Development Authority (GMADA) and Haryana Government through Haryana Urban Development Authority (HUDA) now called Haryana Shehri Vikas Pradhikaran (HSVP).

AAI holds 51.0% of the equity shares and the rest of the equity share capital is held equally by GMADA (24.5%) and HUDA (24.5%).

CHIAL is experiencing shortfall in first as well as in second control period. But on contrary to the huge amount of shortfall, CHIAL has not proposed to increase much in the aeronautical charges. The proposed charges are increased marginally so as to sustain in market for long term and to be competitive in market.

In view of the above, we are pleased to submit the proposal of MYTP for the second control period i.e from 01/04/2021 to 31/03/2026 along with true-up of first control period i.e from 01/04/2016 to 31/03/2021 for your kind perusal and approval. The proposed tariff rate card would be submitted shortly.

Thanking You.

**For CHANDIGARH INTERNATIONAL AIRPORT LIMITED**

  
(Ajay Kumar)  
Chief Executive Officer

अजय कुमार  
मुख्य कार्यकारी अधिकारी / CEO  
चण्डीगढ़ इंटरनेशनल एयरपोर्ट लिमिटेड  
Chandigarh International Airport Limited

**Encl: As below**  
**Annexure I – Write Up**  
**Annexure II – MYTP Working Sheet**

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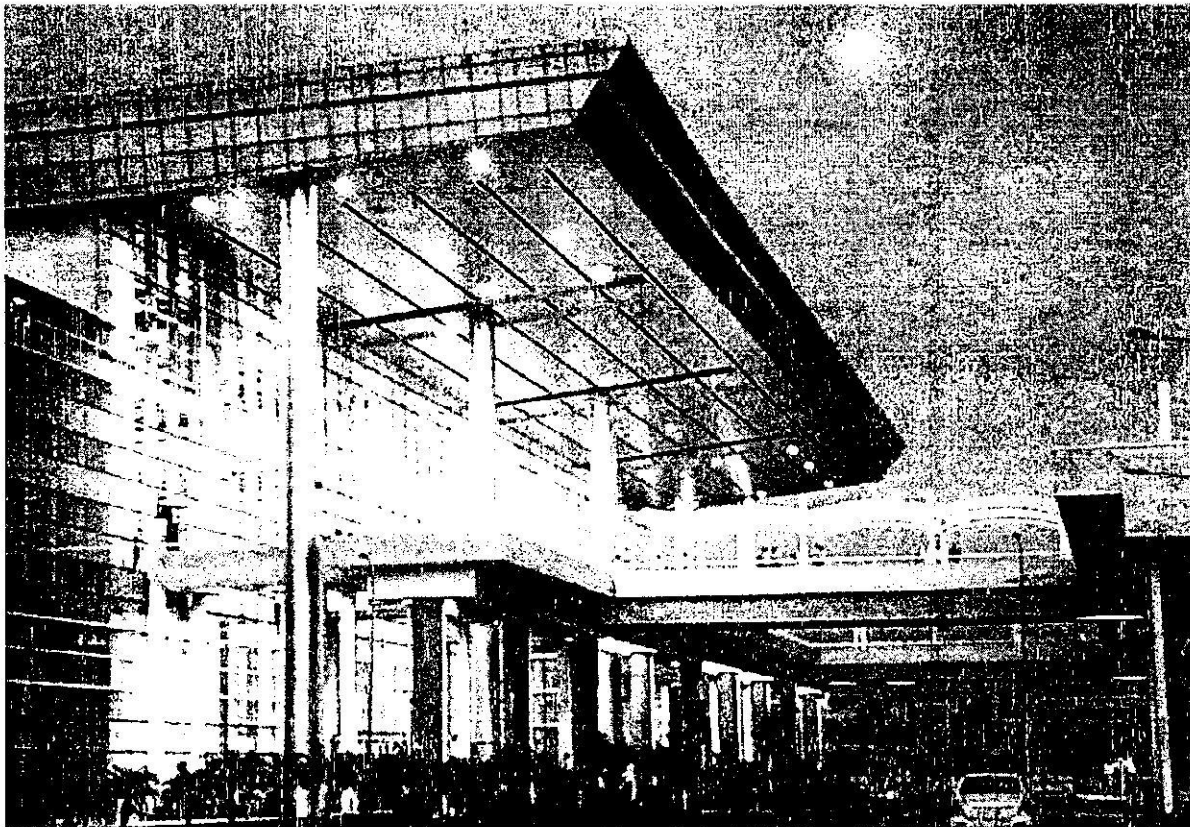
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CIN U63013CH2010GOI031999

# CHANDIGARH INTERNATIONAL AIRPORT LIMITED



## **PROPOSAL**

In the matter of determination of Multi Year Tariff for consideration of Airports Economic Regulatory Authority of India (AERA) for the second control period (01 Apr 2021- 31 Mar 2026) in respect of Chandigarh International Airport Limited (CHIAL).

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## 1. Background

Chandigarh International Airport Limited, (CHIAL) was incorporated in 2010 as a company under the Companies Act, 2013 to build and operate a new terminal of international standards at the Chandigarh Airport. It is a joint venture of the Airports Authority of India (AAI), Punjab Government through Greater Mohali Area Development Authority (GMADA) and Haryana Government through Haryana Urban Development Authority (HUDA) now called Haryana Shehri Vikas Pradhikaran (HSVP).

AAI holds 51.0% of the equity shares and the rest of the equity share capital is held equally by GMADA (24.5%) and HUDA (24.5%).

AAI's contribution to equity was provided by cost of the new integrated terminal building and other assets constructed by AAI. The balance equity was equally contributed by GMADA and HUDA by way of cost of land acquired for the project.

The construction of the new integrated terminal building was completed on 01 Sep 2015. CHIAL started its commercial operations from 19 Oct 2015 being Joint User Air-field. The responsibility for providing major airside facilities and Air Navigation Services at the Airport rests with the Indian Air Force (IAF).

CHIAL's other facilities include an apron and connecting taxiways for conducting its operations efficiently. CHIAL is proposing to build a cargo terminal facility in order to facilitate cargo services.

CHIAL's major source of revenue from aeronautical services is User Development Fees (UDF) as RNFC and landing charges is collected by AAI & IAF.

The capacity of the Airport is 4.5 million and may cater passengers to the tune of 6 million. Since the terminal building handled 1.5 million passengers in FY16, CHIAL was declared as a major airport w.e.f. FY17 as per section 2(i) of AERA Act. Consequently, CHIAL was mandatorily required to follow the Guidelines issued by the Authority and submit its proposal to the Authority for Tariff determination.

Considering the Guidelines issued by the Authority, under Directions 5 dated 28 Feb 2011, CHIAL is proposing a minor revision in Aeronautical tariff for the next control period i.e. period starting from 01 Apr 2021 to 31 Mar 2026. With this Multi Year Tariff Proposal (MTYP), CHIAL request the Authority to review the same and provide a kind approval for the revised Aeronautical rates for the next control period.

Chandigarh International Airport Limited

ਚੰਡੀਗੜ੍ਹ ਇੰਟਰਨੈਸ਼ਨਲ ਏਅਰਪੋਰਟ ਲਿਮਿਟੇਡ  
Chandigarh International Airport Ltd.  
ਨਵਾ ਸਿਵਿਲ ਏਅਰ ਟਰਮਿਨਲ, ਚੰਡੀਗੜ੍ਹ  
New Civil Air Terminal, Chandigarh



## 2. Methodology

The methodology adopted by CHIAL while determining Aggregate Revenue Requirement ("ARR") for MYTP is based on AERA Act, 2008 and the Airport Guidelines issued by AERA in February 2011.

The methodology taken into account while calculating ARR is the Hybrid-Till mechanism, wherein, only 30% of the Non-Aeronautical revenue is to be used for cross-subsidizing the aeronautical charges. CHIAL has determined the Aggregate Revenue Requirement (ARR) for the 2<sup>nd</sup> control period is on the basis of the following Regulatory Building Blocks:

- Regulatory Asset Base (RAB);
- Depreciation (D);
- Fair Rate of Return applied to the Regulatory Asset Base (FRoR x RAB);
- Operation and Maintenance Expenditure (O);
- Taxation (T);
- Revenue from services other than aeronautical services (NAR).

Based on the building blocks provided above, the formula for determining ARR under Hybrid Till is as follows:

$$ARR = \sum_{t=1}^5 (ARR_t) \text{ and}$$

$$ARR_t = (FRoR \times RAB_t) + D_t + O_t + T_t - 30\% \text{ of } NAR_t$$

't' is the Tariff Year in the Control Period;

ARR<sub>t</sub> is the Aggregate Revenue Requirement for year 't';

FRoR is the Fair Rate of Return for the control period;

RAB<sub>t</sub> is the Regulatory Asset Base for the year 't';

D<sub>t</sub> is the Depreciation corresponding to the RAB for the year 't';

O<sub>t</sub> is the Operation and Maintenance Expenditure for the year 't', which includes all expenditures incurred by the Airport Operator(s) including expenditure Incurred on statutory operating costs and other mandate operating costs;

T<sub>t</sub> is the corporate tax for the year 't' paid by the airport operator on the aeronautical profit; and

NAR<sub>t</sub> is revenue from services other than aeronautical services for the year 't'

The present value of total aeronautical revenue that is estimated to be realized each year during the control period at proposed tariff levels is compared with the present value of the ARR during the control period. In case the present value of estimated aeronautical revenue during the control period is lower than the present value of ARR during the control period, the airport operator may opt to increase the proposed tariff. In case the present value of estimated aeronautical revenue is higher than the present value of the ARR then the airport operator will have to reduce its proposed tariff. However, considering the tariff rate card of 1<sup>st</sup> control period into consideration CHIAL is not proposing much increase in the rate card despite huge shortfall in order to make this airport competitive with surrounding airports.

As per, Order No. 17/2016-17, the Authority proposed to exclude the cost of land from the RAB, as it is a non-depreciable asset. However the Authority had also proposed to conduct a separate study for Fair return on Land cost. Subsequently, vide Order No.42/2018-19 dated 05 Mar 2019, the Authority in the matter of determination of Fair Rate of Return (FRoR) on cost of land, the Authority decided that in case land is purchased by the airport operating company, the compensation shall be in the form of equated annual instalments computed at actual cost of debt or SBI base rate plus 2% whichever is lower over a period of thirty years. The equated annual instalment is to be calculated as per the following formula

Equated Annual Instalment=  $\text{cost} \times \text{Rate} (1+\text{Rate})^{30} / [(1+\text{Rate})^{30}-1]$

Where,

Cost: Annual Cost of Land

Rate: Actual cost of debt or SBI base rate plus 2% whichever is lower

In case of Chandigarh airport, the Government of Punjab and Government of Haryana through GMADA and HUDA, had provided the land for the development of the airport and treated the cost of land (INR 45,318.7 Lakhs) as a part of their equity in CHIAL. Based on the abovementioned Order, an equated annual instalment has been considered for calculation of return on land cost contributed by the Government of Haryana & Government of Punjab. The said land was acquired by state government by giving compensation to the respective land-owners.

## 3. True Up

In line with the recommendations of the Authority, as mentioned in Order no. 17/2016-17 and considering the annual instalment as per Order no. 42/2018-19, for calculation of return on land cost the true up has been calculated as per table below:

Particulars in INR Lakhs	FY17	FY18	FY19	FY20	FY21
	Actual	Actual	Actual	Actual	Estimated
FRoR x RAB	5,730.3	5,443.5	5,122.5	4,768.0	4,613.8
Depreciation	2,879.2	2,966.4	3,074.5	3,063.7	2,174.0
Operating Expenses	1,681.6	2,113.9	2,544.1	3,077.7	2,802.7
Taxes	-	189.1	374.4	420.8	-
Add: Fair return on Land cost based on SBI Base Rate <sup>1</sup> plus 2%	4,783.9	4,562.9	4,709.9	4,380.9	4,111.6
Total Aggregate Revenue Requirement	15,074.9	15,275.7	15,825.4	15,711.0	13,702.1
Less: 30% of Non Aero Revenue	(551.3)	(818.7)	(1017.2)	(1254.5)	(658.5)
Net Aggregate Revenue Requirement-Actual	14,523.6	14,457.0	14,808.2	14,456.5	13,043.6
Actual Aero Revenue	1,454.6	5,548.5	6,746.1	7,508.8	2,610.4
Compounding Factor(#)	1.9	1.7	1.5	1.3	1.1
FV Net Aggregate Revenue Requirement	27,974.0	24,426.0	21,946.8	18,794.4	14,869.7
FV Actual Aero Revenue	2,801.6	9,374.5	9,998.2	9,761.9	2,975.8
<b>True Up Adjustment</b>	<b>25,172.4</b>	<b>15,051.6</b>	<b>11,948.6</b>	<b>9,032.5</b>	<b>11,893.9</b>
<b>Shortfall to be adjusted in the next control period</b>	<b>73,098.9</b>				

In line with the Authority decision on return on Land Cost, CHIAL, has worked out the equated annual instalment. SBI base rate plus 2% has been considered for the estimation of equated annual instalment calculation. The following table summarises the equated annual instalment calculation

Return of Land Cost in INR Lakhs	FY17	FY18	FY19	FY20	FY21
Actual Cost of Land	40,786.9	40,786.9	40,786.9	40,786.9	40,786.9
SBI Base rate	9.3%	8.7%	9.1%	8.2%	7.4%
SBI Base rate +2%	11.3%	10.7%	11.1%	10.2%	9.4%
<b>Equated Monthly Instalment</b>	<b>4,783.9</b>	<b>4,562.9</b>	<b>4,709.9</b>	<b>4,380.9</b>	<b>4,111.6</b>

Out of the total land area, 10% i.e. 30 acres of land has been earmarked for commercial development, therefore, the same has been excluded and only the purely aeronautical land area i.e. remaining 90% has been considered for computation of return.

<sup>1</sup>Source: <https://bank.sbi/web/interest-rates/interest-rates/base-rate-historical-data>

#### 4. Capital Expenditure

Considering the requirement of the up gradation of the airport in order increase the facility for passengers, airlines & other stakeholders, CHIAL has planned to incur the capital expenditure during the 2<sup>nd</sup> control period. Year wise additions to Gross block and closing for the 2<sup>nd</sup> control period are as under:

Gross Block in INR Lakhs	FY20	FY21	FY22	FY23	FY24	FY25	FY26
	Closing Block	Closing Block	Opening Block	Opening Block	Opening Block	Opening Block	Opening Block
Land	45,318.7	45,318.7	45,318.7	45,318.7	45,318.7	45,318.7	45,318.7
Building Terminal/Other Buildings	29,389.8	29,389.8	29,389.8	30,337.8	31,337.8	33,737.8	42,137.8
Buildings Temporary	144.7	144.7	144.7	144.7	144.7	144.7	144.7
Roads, Bridges & Culverts-Carpeted	1,693.0	1,693.0	1,693.0	1,693.0	1,693.0	1,693.0	1,693.0
Apron	4,769.1	6,169.1	6,169.1	8,069.1	11,069.1	14,069.1	14,069.1
Roads, Bridges & Culverts-Non-Carpeted-CISF Security	41.3	41.2	41.2	41.2	41.2	41.2	41.2
Computers & I.T Hardware & Access	103.7	373.7	373.7	1,708.7	1,708.7	3,108.7	5,708.7
Computers & I.T - Servers	183.0	183.0	183.0	183.0	183.0	183.0	183.0
Plant & Machinery-Equipments	6,024.4	8,605.0	8,605.0	8,605.0	8,605.0	8,605.0	8,605.0
Tools & Equipments	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Furniture & Fixtures	823.8	823.5	823.5	873.5	873.5	873.5	873.5
Electrical Installations	7,203.9	7,906.8	7,906.8	9,291.8	9,291.8	9,291.8	9,291.8
Motor Vehicle-Security	0.8	1.1	1.1	1.1	1.1	1.1	1.1
Cars & Jeeps-Security	17.0	17.0	17.0	17.0	17.0	17.0	17.0
Office Equipments	14.9	14.9	14.9	14.9	14.9	14.9	14.9
<b>Total opening block</b>	<b>95,808.0</b>	<b>1,00,761.5</b>	<b>1,00,761.5</b>	<b>1,06,379.5</b>	<b>1,10,379.5</b>	<b>1,17,179.5</b>	<b>1,28,179.5</b>

Chandigarh International Airport Limited

चण्डीगढ़ इंटरनेशनल एयरपोर्ट लिमिटेड  
 Chandigarh International Airport Limited  
 न्यू सिविल एयर टर्मिनल  
 New Civil Air Terminal, 201001

The details of additions to gross block during the 2<sup>nd</sup> control period are tabulated below

Capital Expenditure in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Hanger Work for 02 Nos. of code C Aircraft	200.0	1,000.0	-	-	-
Development of PTT phase 2 towards J Link	-	1,000.0	3,000.0	-	-
Extension of Apron for 05 Nos. of parking bay	-	2,000.0	-	-	-
Extension of Corridor with 04 Nos. of Aerobridge Phase -1	-	-	2,400.0	3,600.0	-
Integrated Operational Offices	-	-	-	2,000.0	-
IT Infrastructure along with security equipment	-	-	1,400.0	2,600.0	-
Extension of Building Corridor International Side	-	-	-	2,800.0	4,200.0
05 Nos of additional parking bays(Extension of Apron Domestic Side)	-	-	-	-	2,500.0
Over all development of integrated Cargo Building	-	-	-	-	2,500.0
(Phase -II) CAT-III B Lighting System	700.0				
Provision of 10 Nos. AVDGS System for existing and new Apron Area bays with centralized control	220.0				
Provision of GPU/PCA for existing PBB's	200.0				
Provision of High Mast and Associated works for opposite side of Apron	25.0				
Provision of Baggage drop system.	200.0				
Energy efficiency scheme.	40.0				
Canopy at Entry Point along with shed for parking QRT Vehicles of Punjab Police, canopy at basement and at vehicle gate	70.0				
Construction of Southern Taxi link Towards runway 29 and H taxi Link	1,900.0				
Extension of corridor of departure & arrival of New Terminal building for four nos. parking bays (E-Code) towards new apron extension side including electrical works	510.0				
Provision of ticketing counter	110.0				
Provision of view cutter at flyover to restrict the view of IAF area from public.	40.0				
Provision of Tactile flooring	18.0				
CUSS/KIOSK	90.0				
Furniture & fixtures for PAX Facilities	50.0				
BDDS Equipments& Threat containment vassal (TCV) for In-line system	605.0				
Hydraulic Tyre Killers/Bollards/ Road Blockers	110.0				
Computers and Peripherals/ Accessories, Software, etc	40.0				
IT Network (Hardware/Software) setup at CHIAL	70.0				
E-Gate for Immigration (Automatic Access Control System(AACS))	30.0				
Automatic Tray Retrieval System	100.0				
SITC of new HD cameras SCCTV system at CHIAL	290.0				
<b>Total Capital Expenditure</b>	<b>5,618.0</b>	<b>4,000.0</b>	<b>6,800.0</b>	<b>11,000.0</b>	<b>9,200.0</b>

**1. Hanger Work for 02 Nos. of code C Aircraft3**

At present hangers are not available at Chandigarh airport. For optimum utilization of infrastructure, there is need of construction of 4-5 hangers. Initially CHIAL is planning for construction of 2 Hangers in phase-I to accommodate parking of aircrafts as well as focusing on invitation of MRO business at Chandigarh Airport. Airlines will not need to move to other airports for minor repair & maintenance and manage to save costs.

**2. Development of PTT phase 2 towards J Link**

To reduce runway/taxiway occupancy time, it is proposed to construct parallel taxi track towards runway 11 side near J Taxi Link. Being a civil enclave, IAF shows a concern to look into the minimization of runway occupancy time by the commercial flights and construction/development of Parallel taxi track Phase II will help to reduce the runway occupancy time of aircraft. This Operational infrastructure facility will provide optimization of available runway/ taxiway/apron. It will reduce the turnaround period with lesser fuel consumption and less waiting time for landing and take-off resulting in cost effective airport. This may increase into more connectivity to the airport and ultimately end users will be benefitted through reduction in cost & time.

**3. Extension of Apron for 05 Nos. of parking bay (International Side)**

There will be further need of night parking at this Airport catering to Chandigarh part of Punjab, part of Haryana/part of Himachal Pradesh. With the increase in traffic, it is expected that the present capacity of apron will be saturated by 2024 hence need for the extension of apron area. The extension of apron area will result in following benefits:-

- i) Increase in parking facilities for airlines and MRO facilities.
- ii) Early departure of flights.
- iii) Fuel saving.
- iv) Better connectivity for the passengers.
- v) Optimization of manpower.

**4. Extension of Corridor with 04 Nos. of Aerobridge Phase -1 - Domestic Side**

By 2024 the present terminal building capacity may begin to saturate and the augmentation will be required. Hence extension of corridor adjoining existing terminal building new set up along with aerobridges will be required for the passenger movement & passenger facilitation. It will help Passengers to avoid exposure to extreme weather conditions. Also it will help in avoiding the inconvenience to Passengers while shifting from aircraft to buses & vice versa. Further, it will reduce the turnaround time for the airlines.

**5. Integrated Operational Offices**

At present there is no dedicated office complex. The operational offices of various stakeholders are accommodated in the building itself. With growth of traffic, building space will be needed for operational purpose/passenger facilitation; therefore a new operational office is planned to be setup with more capacity will be required separately. More space will be available for passenger facilitation in building.

After shifting of administrative offices, available space at terminal building will be allocated for more aeronautical/operational requirements.

**6. IT Infrastructure along with security equipment**

To cater the enhanced terminal building capacity with more number of CCTV, FIDS, PA system along with related security & IT equipments i.e. HHMD, DFMD, ETD, X ray Machine. By creation of better IT Infrastructure & more updated security equipments, it will help in anticipation in identification of the security threats to the airport & low risk for the passenger.

**7. Extension of Building Corridor International Side**

By 2025 the present terminal building capacity may be saturate and the augmentation shall be required. Hence extension of corridor adjoining existing terminal building will be required for the passenger movement



& passenger facilitation. This extension of corridor will connect parking bays directly to the terminal building towards International side and enhance terminal building capacity. It will also help Passengers to avoid exposure to extreme weather conditions. Further, it will help in avoiding the inconvenience to passengers while shifting from aircraft to buses & vice versa and reduce the turnaround time for the airlines

#### 8. 05 Nos of additional parking bays (Extension of Apron)-Domestic Side

There will be further need of night parking at this Airport catering to Chandigarh part of Punjab, part of Haryana/part of Himachal Pradesh. With the increase in traffic, it is expected that the present capacity of apron will be saturated by 2024 hence need for the extension of apron area. The extension of apron area will result in following benefits:-

- Increase in parking facilities for airlines and MRO facilities.
- More capacity of apron

The summary of additions to Gross Block in the 2<sup>nd</sup> control period is tabulated below

Additions to Gross Block in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Land	-	-	-	-	-
Building Terminal/Other Buildings	948.0	1,000.0	2,400.0	8,400.0	6,700.0
Buildings Temporary	-	-	-	-	-
Roads, Bridges & Culverts- Carpeted	-	-	-	-	-
Apron	1,900.0	3,000.0	3,000.0	-	2,500.0
Roads, Bridges & Culverts- Non-Carpeted-CISF Security	-	-	-	-	-
Computers & I.T Hardware & Access	1,335.0	-	1,400.0	2,600.0	-
Computers & I.T -Servers	-	-	-	-	-
Plant & Machinery-Equipments	-	-	-	-	-
Tools & Equipments	-	-	-	-	-
Furniture & Fixtures	50.0	-	-	-	-
Electrical Installations	1,385.0	-	-	-	-
Motor Vehicle-Security	-	-	-	-	-
Cars & Jeeps-Security	-	-	-	-	-
Office Equipments	-	-	-	-	-
<b>Total additions to Gross Block during the year</b>	<b>5,618.0</b>	<b>4,000.0</b>	<b>6,800.0</b>	<b>11,000.0</b>	<b>9,200.0</b>

The summary Closing Gross Block in the 2<sup>nd</sup> control period is tabulated below

Closing Gross Block in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Land	45,318.7	45,318.7	45,318.7	45,318.7	45,318.7
Building Terminal/Other Buildings	30,337.8	31,337.8	33,737.8	42,137.8	48,837.8
Buildings Temporary	144.7	144.7	144.7	144.7	144.7
Roads, Bridges & Culverts- Carpeted	1,693.0	1,693.0	1,693.0	1,693.0	1,693.0
Apron	8,069.1	11,069.1	14,069.1	14,069.1	16,569.1
Roads, Bridges & Culverts- Non-Carpeted-CISF Security	41.2	41.2	41.2	41.2	41.2
Computers & I.T Hardware & Access	1,708.7	1,708.7	3,108.7	5,708.7	5,708.7
Computers & I.T -Servers	183.0	183.0	183.0	183.0	183.0
Plant & Machinery-Equipments	8,605.0	8,605.0	8,605.0	8,605.0	8,605.0
Tools & Equipments	80.0	80.0	80.0	80.0	80.0
Furniture & Fixtures	873.5	873.5	873.5	873.5	873.5
Electrical Installations	9,291.8	9,291.8	9,291.8	9,291.8	9,291.8
Motor Vehicle-Security	1.1	1.1	1.1	1.1	1.1
Cars & Jeeps-Security	17.0	17.0	17.0	17.0	17.0
Office Equipments	14.9	14.9	14.9	14.9	14.9
<b>Total Closing Gross Block</b>	<b>1,06,379.5</b>	<b>1,10,379.5</b>	<b>1,17,179.5</b>	<b>1,28,179.5</b>	<b>1,37,379.5</b>

The summary of closing Net Block is tabulated below

Closing Net Block in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Opening CWIP	-	-	-	-	-
Capex during the period	5,618.0	4,000.0	6,800.0	11,000.0	9,200.0
Transfer to Gross Block	5,618.0	4,000.0	6,800.0	11,000.0	9,200.0
Closing CWIP	-	-	-	-	-
Opening Block	1,00,761.5	1,06,379.5	1,10,379.5	1,17,179.5	1,28,179.5
Transfer from CWIP	5,618.0	4,000.0	6,800.0	11,000.0	9,200.0
Depreciation	19,423.2	22,155.0	25,106.7	28,578.7	32,450.7
Disposal	-	-	-	-	-
Closing Net Block	86,956.3	88,224.5	92,072.8	99,600.8	1,04,928.7

## 5. Depreciation

CHIAL has followed the straight line method of depreciation and depreciation rates applied to various assets are as per recommendations of the Authority, as mentioned in Table 16 of Order no. 17/2016-17.

Accumulated Depreciation in INR Lakhs	FY20	FY21	FY22	FY23	FY24	FY25	FY26
	Closing Block	Closing Block	Opening Block	Opening Block	Opening Block	Opening Block	Opening Block
Land	-	-	-	-	-	-	-
Building Terminal/Other Buildings	4,176.3	5,013.9	5,013.9	5,865.0	6,743.9	7,671.2	8,752.4
Buildings Temporary	105.7	144.7	144.7	144.7	144.7	144.7	144.7
Roads, Bridges Culverts- Carpeted	1,393.5	1,683.0	1,683.0	1,693.0	1,693.0	1,693.0	1,693.0
Apron	3,813.0	3,948.9	3,948.9	4,124.7	4,354.7	4,670.2	5,071.1
Roads, Bridges Culverts- Non-Carpeted-CISF Security	39.2	41.3	41.3	41.3	41.3	41.3	41.3
Computers & I.T Hardware & Access	81.7	96.5	96.5	244.9	488.3	831.6	1,459.8
Computers & I.T - Servers	128.8	154.8	154.8	180.9	183.0	183.0	183.0
Plant & Machinery-Equipments	1,517.1	1,860.5	1,860.5	2,351.0	2,841.4	3,331.9	3,822.4
Tools & Equipments	37.0	50.7	50.7	64.3	78.0	80.0	80.0
Furniture & Fixtures	323.7	394.1	394.1	466.6	541.3	616.0	690.7
Electrical Installations	2,881.4	3,497.3	3,497.3	4,232.6	5,027.0	5,821.5	6,615.9
Motor Vehicle-Security	0.3	0.3	0.3	0.4	0.5	0.6	0.7
Cars & Jeeps-Security	1.5	3.0	3.0	4.4	5.9	7.3	8.8
Office Equipments	4.3	6.8	6.8	9.4	11.9	14.5	14.9
<b>Total Accumulated Depreciation</b>	<b>14,503.2</b>	<b>16,895.7</b>	<b>16,895.7</b>	<b>19,423.2</b>	<b>22,155.0</b>	<b>25,106.7</b>	<b>28,578.7</b>

The depreciation on additions during the year has been considered 50% and the salvage value at the end of life of asset has been considered at 10%. The applied depreciation rates and the depreciation during the year are tabulated below.

Depreciation for the year in INR Lakhs	Rate	FY22	FY23	FY24	FY25	FY26
Land	0.0%	-	-	-	-	-
Building Terminal/Other Buildings	3.0%	851.1	878.9	927.3	1,081.2	1,296.4
Buildings Temporary	30.0%	0.0	-	-	-	-
Roads, Bridges & Culverts- Carpeted	18.0%	10.0	-	-	-	-
Apron	3.0%	175.8	230.0	315.5	401.0	401.0
Roads, Bridges & Culverts- Non-Carpeted-CISF Security	30.0%	-	-	-	-	-
Computers & I.T Hardware & Access	15.0%	148.4	243.5	343.2	628.2	813.5
Computers & I.T -Servers	15.0%	26.1	2.1	-	-	-
Plant & Machinery-Equipments	6.0%	490.5	490.5	490.5	490.5	490.5
Tools & Equipments	18.0%	13.7	13.7	2.0	-	-
Furniture & Fixtures	9.0%	72.5	74.7	74.7	74.7	74.7
Electrical Installations	9.0%	735.2	794.4	794.4	794.4	794.4
Motor Vehicle-Security	9.0%	0.1	0.1	0.1	0.1	0.1
Cars & Jeeps-Security	9.0%	1.5	1.5	1.5	1.5	1.5
Office Equipments	18.0%	2.5	2.5	2.5	0.4	-
<b>Total Depreciation during the year</b>		<b>2,527.4</b>	<b>2,731.8</b>	<b>2,951.7</b>	<b>3,472.0</b>	<b>3,872.0</b>

Chandigarh International Airport Limited

CHIAL, New Civil Air Terminal, New Delhi  
 Chandigarh International Airport Limited  
 New Civil Air Terminal, New Delhi

Accordingly, the closing block of accumulated depreciation for the 2<sup>nd</sup> control period is tabulated below:

Closing block of Depreciation in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Land					
Building Terminal/Other Buildings	5,865.0	6,743.9	7,671.2	8,752.4	10,048.8
Buildings Temporary	144.7	144.7	144.7	144.7	144.7
Roads, Bridges & Culverts- Carpeted	1,693.0	1,693.0	1,693.0	1,693.0	1,693.0
Apron	4,124.7	4,354.7	4,670.2	5,071.1	5,472.1
Roads, Bridges & Culverts- Non-Carpeted-					
CISF Security	41.3	41.3	41.3	41.3	41.3
Computers & I.T Hardware & Access	244.9	488.3	831.6	1,459.8	2,273.3
Computers & I.T –Servers	180.9	183.0	183.0	183.0	183.0
Plant & Machinery-Equipments	2,351.0	2,841.4	3,331.9	3,822.4	4,312.9
Tools & Equipments	64.3	78.0	80.0	80.0	80.0
Furniture & Fixtures	466.6	541.3	616.0	690.7	765.4
Electrical Installations	4,232.6	5,027.0	5,821.5	6,615.9	7,410.3
Motor Vehicle-Security	0.4	0.5	0.6	0.7	0.8
Cars & Jeeps-Security	4.4	5.9	7.3	8.8	10.2
Office Equipments	9.4	11.9	14.5	14.9	14.9
<b>Total closing block</b>	<b>19,423.2</b>	<b>22,155.0</b>	<b>25,106.7</b>	<b>28,578.7</b>	<b>32,450.7</b>

In line with the Authority's decision vide Order No.42/2018-19 dated 05 Mar 2019 on return on Land Cost, CHIAL, has worked out the equated annual instalment i.e. Equated Annual Instalment=  $\frac{\text{cost} \times \text{Rate} (1+\text{Rate})^{30}}{[(1+\text{Rate})^{30}-1]}$ . The return has been computed from the 1<sup>st</sup> control period as the land has been purchased prior to 1<sup>st</sup> control period and the same has been considered while computing the actual ARR for the 1<sup>st</sup> control period. The SBI Base rate + 2% of the respective years has been taken for the computation of return on land on the line of AERA Order. Out of the total land area, 10% i.e. 30 acres of land has been earmarked for commercial development, therefore, the same has been excluded and only the purely aeronautical land area i.e. remaining 90% has been considered for computation of return. The detailed amortization schedule is tabulated below:

Land Amortization Schedule in INR Lakhs	Opening Balance	Recovery towards Cost Incurred	Closing Land cost balance	Payment towards Interest return on land cost
FY17	40,786.9	195.3	40,591.5	4,588.5
FY18	40,591.5	239.9	40,351.6	4,323.0
FY19	40,351.6	251.1	40,100.5	4,458.9
FY20	40,100.5	310.7	39,789.8	4,070.2
FY21	39,789.8	371.4	39,418.5	3,740.2
FY22	39,418.5	406.3	39,012.2	3,705.3
FY23	39,012.2	444.5	38,567.7	3,667.1
FY24	38,567.7	486.2	38,081.5	3,625.4
FY25	38,081.5	532	37,549.5	3,579.7
FY26	37,549.5	582	36,967.6	3,529.7

As the total amount recoverable in respect of land cost during FY17 to FY26 is INR 3,819.27 Lakhs. The balance land cost of INR 36,967.60 Lakhs will be claimed in next control periods as per the methodology approved by AERA.

## 6. Allocation

Based on detailed workings on the Fixed Asset Register, the following Aeronautical allocation of the gross block has been concluded

Particulars	FY22	FY23	FY24	FY25	FY26
Land	-	-	-	-	-
Building Terminal/Other Buildings	90.5%	90.5%	90.5%	90.5%	90.5%
Buildings Temporary	100.0%	100.0%	100.0%	100.0%	100.0%
Roads, Bridges & Culverts- Carpeted	100.0%	100.0%	100.0%	100.0%	100.0%
Apron	100.0%	100.0%	100.0%	100.0%	100.0%
Roads, Bridges & Culverts- Non-Carpeted- CISF Security	100.0%	100.0%	100.0%	100.0%	100.0%
Computers & I.T Hardware & Access	98.0%	98.0%	98.0%	98.0%	98.0%
Computers & I.T -Servers	100.0%	100.0%	100.0%	100.0%	100.0%
Plant & Machinery-Equipments	96.6%	96.6%	96.6%	96.6%	96.6%
Tools & Equipments	99.7%	99.7%	99.7%	99.7%	99.7%
Furniture & Fixtures	92.5%	92.5%	92.5%	92.5%	92.5%
Electrical Installations	94.3%	94.3%	94.3%	94.3%	94.3%
Motor Vehicle-Security	100.0%	100.0%	100.0%	100.0%	100.0%
Cars & Jeeps-Security	100.0%	100.0%	100.0%	100.0%	100.0%
Office Equipments	93.7%	93.7%	93.7%	93.7%	93.7%
<b>Average Aero RAB%</b>	<b>93.6%</b>	<b>93.9%</b>	<b>94.2%</b>	<b>94.4%</b>	<b>94.1%</b>

Land has not been considered a part of Aero RAB and the return on land has been separately calculated as mentioned in the previous chapters.

Accordingly, the Opening Aero Gross RAB, additions to Aero Gross RAB, Aero depreciation and closing Gross RAB are tabulated below

Opening Aero Gross RAB in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Building Terminal/Other Buildings	26,597.8	27,455.7	28,360.7	30,532.7	38,134.7
Buildings Temporary	144.7	144.7	144.7	144.7	144.7
Roads, Bridges & Culverts- Carpeted	1,693.0	1,693.0	1,693.0	1,693.0	1,693.0
Apron	6,169.1	8,069.1	11,069.1	14,069.1	14,069.1
Roads, Bridges & Culverts- Non-Carpeted- CISF Security	41.2	41.2	41.2	41.2	41.2
Computers & I.T Hardware & Access	366.4	1,675.3	1,675.3	3,047.9	5,597.2
Computers & I.T -Servers	183.0	183.0	183.0	183.0	183.0
Plant & Machinery-Equipments	8,312.4	8,312.4	8,312.4	8,312.4	8,312.4
Tools & Equipments	79.8	79.8	79.8	79.8	79.8
Furniture & Fixtures	761.7	808.0	808.0	808.0	808.0
Electrical Installations	7,457.8	8,764.1	8,764.1	8,764.1	8,764.1
Motor Vehicle-Security	1.1	1.1	1.1	1.1	1.1
Cars & Jeeps-Security	17.0	17.0	17.0	17.0	17.0
Office Equipments	14.0	14.0	14.0	14.0	14.0
<b>Total Opening Aero Gross RAB</b>	<b>51,838.9</b>	<b>57,258.4</b>	<b>61,163.4</b>	<b>67,708.0</b>	<b>77,859.3</b>

Additions to Aero Gross RAB in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Building Terminal/Other Buildings	857.9	905.0	2,172.0	7,602.0	6,063.5
Buildings Temporary	-	-	-	-	-
Roads, Bridges & Culverts- Carpeted	-	-	-	-	-
Apron	1,900.0	3,000.0	3,000.0	-	2,500.0
Roads, Bridges & Culverts- Non-Carpeted-CISF Security	-	-	-	-	-
Computers & I.T Hardware & Access	1,308.9	-	1,372.7	2,549.2	-
Computers & I.T -Servers	-	-	-	-	-
Plant & Machinery-Equipments	-	-	-	-	-
Tools & Equipments	-	-	-	-	-
Furniture & Fixtures	46.2	-	-	-	-
Electrical Installations	1,306.4	-	-	-	-
Motor Vehicle-Security	-	-	-	-	-
Cars & Jeeps-Security	-	-	-	-	-
Office Equipments	-	-	-	-	-
<b>Total additions to Aero Gross RAB during the year</b>	<b>5,419.5</b>	<b>3,905.0</b>	<b>6,544.7</b>	<b>10,151.2</b>	<b>8,563.5</b>

For calculation of Aero Depreciation, the rates approved by the Authority in the 1<sup>st</sup> control period have been considered.

Particulars	Depreciation rate for Aero RAB
Building Terminal/Other Buildings	3.0%
Buildings Temporary	30.0%
Roads, Bridges & Culverts- Carpeted	18%
Apron	3%
Roads, Bridges & Culverts- Non-Carpeted-CISF Security	30.0%
Computers & I.T Hardware & Access	15.0%
Computers & I.T -Servers	15.0%
Plant & Machinery-Equipments	6.0%
Tools & Equipments	18.0%
Furniture & Fixtures	9.0%
Electrical Installations	9.0%
Motor Vehicle-Security	9.0%
Cars & Jeeps-Security	9.0%
Office Equipments	18.0%



Further, the salvage value at the end of useful life of the asset has been considered at 10%. Accordingly, the opening block of Aero Depreciation, the aero depreciation during the year are tabulated below

Opening block of Aero Depreciation in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Building Terminal/Other Buildings	4,865.2	5,594.9	6,348.4	7,143.5	8,070.5
Buildings Temporary	123.1	130.2	130.2	130.2	130.2
Roads, Bridges & Culverts- Carpeted	1,623.4	1,623.4	1,623.4	1,623.4	1,623.4
Apron	4,442.0	4,634.2	4,892.6	5,231.9	5,611.8
Roads, Bridges & Culverts- Non-Carpeted-CISF Security	39.18	39.18	39.18	39.18	39.18
Computers & I.T Hardware & Access	95.2	198.8	425.0	743.8	1,327.4
Computers & I.T -Servers	150.0	164.7	164.7	164.7	164.7
Plant & Machinery-Equipments	1,767.4	2,216.2	2,665.1	3,114.0	3,562.8
Tools & Equipments	43.1	56.0	68.9	71.8	71.8
Furniture & Fixtures	377.0	440.6	506.1	571.5	637.0
Electrical Installations	3,356.7	4,013.7	4,723.6	5,433.5	6,143.4
Motor Vehicle-Security	0.3	0.4	0.5	0.6	0.7
Cars & Jeeps-Security	1.8	3.1	4.5	5.9	7.3
Office Equipments	5.0	7.2	9.5	11.8	12.6
<b>Total opening block of Aero Depreciation</b>	<b>16,889.3</b>	<b>19,122.7</b>	<b>21,601.6</b>	<b>24,285.7</b>	<b>27,402.6</b>

Aero Depreciation for the year in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Building Terminal/Other Buildings	729.7	753.5	795.1	927.0	1,111.5
Buildings Temporary	7.1	0.0	0.0	0.0	0.0
Roads, Bridges & Culverts- Carpeted	-	-	-	-	-
Apron	192.2	258.4	339.4	379.9	413.6
Roads, Bridges & Culverts- Non-Carpeted-CISF Security	-	-	-	-	-
Computers & I.T Hardware & Access	103.6	226.2	318.8	583.5	755.6
Computers & I.T -Servers	14.7	-	-	-	-
Plant & Machinery-Equipments	448.9	448.9	448.9	448.9	448.9
Tools & Equipments	12.9	12.9	2.9	0.0	0.0
Furniture & Fixtures	63.6	65.4	65.4	65.4	65.4
Electrical Installations	657.0	709.9	709.9	709.9	709.9
Motor Vehicle-Security	0.1	0.1	0.1	0.1	0.1
Cars & Jeeps-Security	1.4	1.4	1.4	1.4	1.4
Office Equipments	2.3	2.3	2.3	0.8	-
<b>Total additions during the year</b>	<b>2,233.5</b>	<b>2,478.9</b>	<b>2,684.1</b>	<b>3,116.9</b>	<b>3,506.4</b>

The summary of Aero RAB for the 2<sup>nd</sup> control period is tabulated below

Closing Aero Net RAB in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Opening Aero Gross RAB	51,838.9	57,258.4	61,163.4	67,708.0	77,859.3
Additions to Aero Gross RAB	5,419.5	3,905.0	6,544.7	10,151.2	8,563.5
Opening Accumulated Aero Depreciation	16,889.3	19,122.7	21,601.6	24,285.7	27,402.6
Aero Depreciation During the year	2,233.5	2,478.9	2,684.1	3,116.9	3,506.4
Disposal	-	-	-	-	-
<b>Closing Aero Net RAB</b>	<b>38,135.7</b>	<b>39,561.7</b>	<b>43,422.3</b>	<b>50,456.7</b>	<b>55,513.8</b>

## 7. Means of Finance

### 7.1. Cost of equity

As per AERA/20010/MYTP/CHIAL/CP-II/2016-17/ Vol. 1 OrderNo.17/2016-17, AERA had decided to consider the Cost of Equity at 14% p.a. as considered in the tariff determination process for other AAI airports for the 1<sup>st</sup> control period. Further, FRoR was considered at cost of equity i.e.14% p.a. for the 1<sup>st</sup> control period because of the no debt structure of capital.

However, in recently issued 2<sup>nd</sup> control period Consultation Paper in matter of Mumbai International Airport Limited. The Authority has conducted a detailed study for the cost of equity has been considered to be 15%. Based on the IIM Bangalore Study, commissioned by AERA the cost of equity considered was in line with 15.1% which is computed using the Capital Asset Pricing Model.

$$\text{CoE} = R_f + \beta_e (R_M - R_f),$$

where

CoE = Cost of Equity

R<sub>f</sub> = Risk-free rate.

R<sub>M</sub> – R<sub>f</sub> = Equity Risk Premium (ERP).

β<sub>e</sub> = Equity beta

Assumptions

- Homogeneous expectations (distinguishes from portfolio theory)
- Quadratic utility or multivariate normality of returns
- Rational, risk-averse investors
- Perfect capital markets
- Unrestricted short selling
- Borrowing and lending at the riskless rate

The standard approach in CAPM methodology is to find a set of comparable firms and compute a cost of capital based on the comparable cost of capital of those firms. The approach accounts for idiosyncratic differences in financial leverage, operations scale, revenue till arrangement, and ownership structure. The independent study has considered actual data rather than plausible motivations for drivers of cost of equity. There are three components required for computing the cost of equity using CAPM – risk-free rate (R<sub>f</sub>), equity beta and equity risk premium (ERP). R<sub>f</sub> and ERP are macro-economic in nature and can be derived from using time series analysis.

The summary of the methodology and conclusions of the estimation of cost of equity for MIAL is tabulated below

Cost of Equity :MIAL		
Variable	Gearing Based on Target Gearing Ratio	Basis
Asset Beta	0.5704	The equity betas for listed airports were estimated from the comparables' set, viz. AoT, MAHB and Sydney Airport from Bloomberg. The equity betas were un-levered to find the corresponding asset betas. The proximity score weighted average unlevered asset beta for MIAL was arrived at as 0.5704.
Gearing Ratio (D/E)	0.9231	As a benchmark, the Indian infrastructure space was examined and it was found that infrastructure firms employ, on average, a market debt to (debt + equity) ratio of 47.86%. The estimate from this analysis is reasonably close to the 48% gearing ratio used on average by international airports
Gearing Ratio (D/D+E)	48.00%	
Equity Beta	0.9391	The proximity score weighted asset beta of MIAL (0.5704) Was re-levered to calculate equity beta whose value is arrived at 0.9391.
Risk Free Rate	7.56%	10-Year GOI Bonds, 18-Year Daily Avg.
Equity Risk Premium	8.06%	Equity Risk Premium (ERP) was derived as the simple average of the three independent study estimates (historical average, based on CDS and bond ratings, forward looking estimate as suggested by Grant Thornton) i.e. 8.06%
Cost of Equity	15.13%	Risk free rate + Equity Risk Premium*Equity beta
CHIAL's Cost of Equity	15.00%	

Source: MIAL Consultation Paper No. 35/2020-21

Accordingly CHIAL is proposing Cost of equity @15% in line with the recent study conducted by IIM for AERA in case of MIAL wherein Cost of equity of @15.13% was proposed.

## 7.2. Cost of Debt

Considering that CHIAL would have sufficient internal accruals to fund proposed additions to RAB during the 2<sup>nd</sup> control period and consequently no debt will be required.

## 7.3. Fair Rate of Return (FRoR)

Given that there is no outstanding or proposed debt, hence the cost of equity i.e. 15% has been considered as FRoR.

## 8. Operation & Maintenance cost

As provided in Clause 5.4 of the Airport Guidelines, the operational and maintenance expenditure shall include all expenditures incurred by the Airport Operators including expenditure incurred on statutory operating cost and other mandated operating costs.

Operation and Maintenance costs have been segregated into:

- Manpower expenses
- Operating expenses
- Administrative & Other expenses
- PSF Security Expenses
- Finance cost

Generally the financial projections are based on the economic and industry scenarios prevailing as on the date of analysis. However, the past performance of the any business serves. But to facilitate proper analysis and interpretation of financial statements, historical financial statements must be adjusted to reflect the economic realities of "normal" operating conditions. The objective of normalizing historical financial statements is to present the data on a basis comparable to that of other companies in the industry, thereby allowing the reader of the analysis to form conclusions as to the strength or weakness of the subject business relative to its peers. Normalization generally involves adjusting for a number of broad categories:

- Unusual items
- Non- recurring items
- Non operating items
- Changes in accounting principle
- Non conformance with generally accepted accounting principles & practices.

However no normalisation exercise has been carried out to the historical data and it has been assumed that the CHIAL has followed the normal industry practices in carrying out the business. However, 2020 being an abnormal year due to worldwide economic slowdown on account of less business activities, restriction on travel, lockdown in various countries and throughout India during most part of the year due to COVID -19, the performance of CHIAL for FY21 has not been used as basis of future projection. Rather, the financials of FY20 have been used as basis for future projection. Also, the expected CPI Inflation rate of 5%, 5%.7%.7% &7% has been considered in all the expenses except electricity & water charges from FY22 to FY26 respectively. The summary of Operation and Maintenance costs is tabulated below:

Operating Expenses in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Manpower expenses	612.4	694.5	802.5	927.4	1,071.7
Operating expenses	2,199.7	2,380.2	2,608.1	2,903.5	3,235.2
Administrative & Other expenses	672.0	741.0	828.6	940.5	1,063.0
Total operating expense	3,484.1	3,815.7	4,239.2	4,771.4	5,369.8

Operation & Maintenance Cost	Assumption for growth (y-o-y basis)
Manpower expenses	While projecting the manpower expenses, pays & allowances including contribution to provident fund (PF), house rent allowance (HRA), dearness allowances (DA) and medical expenses is expected to grow by 13.4% in FY22 over the actual manpower expenses in FY20, 13.4% p.a. in FY23 and at 15.56% p.a. thereafter. The manpower cost towards staff deployment of AAI is also expected to grow at the aforementioned rates. The expected growth rates

Operation & Maintenance Cost	Assumption for growth (y-o-y basis)
	are based on inflation and the headcount additions planned for the 2 <sup>nd</sup> control period. The number of employees is expected to increase to 44 in FY22, 50 in FY 23 and 60 in FY25.
Operating expenses	<p>Operating expenses include repair &amp; maintenance expenses, housekeeping &amp; cleaning works, advertisement &amp; publicity, consumption of stores &amp; spares, electricity &amp; water charges, and rent, rates &amp; taxes.</p> <p>Expenditure on Consumption of Stores &amp; Spares and Repair &amp; maintenance expenditure on civil, electrical, Equipment &amp; Furniture, and Electronics &amp; IT Infrastructure are expected to grow by 10.25% in FY22 over the corresponding actual expenses in FY20, at 10.25% p.a. in FY23, 12.35 %p.a. in FY24 and at 13.42% p.a. thereafter. The expenditure escalations are in line with the expected inflation and remaining useful life of assets.</p> <p>Expenditure on Housekeeping &amp; Cleaning works, Advertisement &amp; Publicity, and rents rates &amp; taxes are expected to grow by 10.25% in FY22 over the corresponding actual expenses in FY20, at 10.25% p.a. in FY23, at 12.35% p.a. y-o-y in FY24 and at 14.49% p.a. thereafter</p> <p>Expenditure on Electricity &amp; Water Charges is expected to grow by 5 % in FY22 over the corresponding actual expenses in FY20, at 5% p.a. in FY23 and FY24 and at 7% p.a. y-o-y thereafter.</p>
Administrative & Other expenses	<p>Postage &amp; Telegram, Printing &amp; Stationery, Telephone Charges, Consultancy Charges, Audit fees Training &amp; Seminar expenses, Hire charges Others, Board Meeting Expenses, Collection charges on PSF, Subscription expenses, Corporate Social Responsibility, Miscellaneous Office Expenses and Other Expenses are expected by grow at 10.25% in FY22 over the corresponding actual expenses in FY20, at 10.25% p.a. in FY23, at 12.35% p.a. in FY24 and at 14.49% p.a. thereafter.</p> <p>Travelling Expenses are expected to decelerate by 21.25% in FY22 over the corresponding actual expenses in FY20, grow at 10.25% p.a. in FY 23, at 12.35% p.a. in FY24 and by 14.49% p.a. thereafter.</p> <p>Insurance expenses are expected to increase at 104.75% in FY22 over the corresponding actual expenses in FY20, grow at 10.25% p.a. in FY 23, at 12.35% p.a. in FY24 and at 14.49% p.a. thereafter. The steep growth in insurance expense in FY21 is on account of budgeted purchase of additional Insurance against building &amp; fire</p> <p>Facilitation Expenses are expected to decelerate by 26.5% in FY22 over the corresponding expense in</p>

Operation & Maintenance Cost	Assumption for growth (y-o-y basis)
	FY20, grow at 10.25% p.a. in FY 23, at 12.35% p.a. in FY24 and by 14.49% p.a. y-o-y thereafter..
	The annual hire charge of manpower for Inline X-ray Baggage is budgeted for a headcount of 32 at INR 110 Lakhs in FY21. These charges are expected to increase 10% y-o-y for during the 2 <sup>nd</sup> control period.

In line with the recommendations for allocation of operating & maintenance expenses to Aeronautical expenses, the Aeronautical operation & Maintenance expenses have been computed below

Aero operation & Maintenance expenses in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Employee expenses	579.9	657.6	759.9	878.2	1,014.8
Operating expenses	2,068.7	2,238.5	2,452.8	2,730.6	3,042.5
Administrative & Other expenses	619.9	683.5	764.1	867.0	979.3
<b>Total Aero operating expense</b>	<b>3,268.4</b>	<b>3,579.6</b>	<b>3,976.9</b>	<b>4,475.8</b>	<b>5,036.7</b>

The computation of aeronautical proportion of employee expenses has been done based on the actual employee projections as tabulated below:

Employee Projections in #	FY22	FY23	FY24	FY25	FY26
Airport systems	7.0	7.0	7.0	9.0	9.0
Commercial	2.0	3.0	3.0	3.0	3.0
Cargo	-	3.0	3.0	5.0	5.0
HRD	6.0	6.0	6.0	6.0	6.0
Finance	5.0	5.0	5.0	5.0	5.0
MT	-	-	-	-	-
Engg-civil	7.0	7.0	7.0	7.0	7.0
Engg-elect.	10.0	10.0	10.0	10.0	10.0
Security	1.0	2.0	2.0	3.0	3.0
Store	-	-	-	1.0	1.0
Hindi	1.0	1.0	1.0	1.0	1.0
Terminal	5.0	6.0	6.0	10.0	10.0
<b>Total</b>	<b>44.0</b>	<b>50.0</b>	<b>50.0</b>	<b>60.0</b>	<b>60.0</b>
<b>Aero percentage</b>	<b>95.5 %</b>	<b>94.0 %</b>	<b>94.0 %</b>	<b>95.0 %</b>	<b>95.0 %</b>
<b>Average</b>	<b>94.7%</b>				

The allocation of Aeronautical Operating expenses has been done based on average Aeronautical RAB. The administrative & other expenses barring hire charges have been allocated between aeronautical and non aeronautical in the proportion of 94% and 6%. The proportion of Hire charges have been allocated on the basis of aeronautical proportion worked out on the basis of number of employee deputed in respective department as approved in AERA order for the 1<sup>st</sup> control period



## 9. Non Aero Revenue

The forecast of various components of non-aeronautical revenue streams for the 2<sup>nd</sup> control period are as under

Non-Aeronautical Revenue in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Admission fees/Commercial Passes	4.4	4.9	5.4	5.9	6.4
Car parking	219.8	237.4	256.4	282.0	310.2
Rent & Services	372.8	372.8	400.8	430.8	463.1
Trading concession	1,742.2	1,933.9	2,146.6	2,339.8	2,550.4
In Flight Catering Charges	6.7	7.4	8.3	9.0	9.8
<b>Total Non-Aeronautical Revenue</b>	<b>2,345.9</b>	<b>2,556.3</b>	<b>2,817.4</b>	<b>3,067.5</b>	<b>3,339.9</b>

The assumptions made for projecting each source of non-aeronautical revenue are as under

Particulars	Assumption for growth (y-o-y basis)
Admission fees/Commercial Passes	Revenue from admission fees/commercial passes is expected to decelerate by 10% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 11% y-o-y in FY23 and FY24 and at 9% y-o-y thereafter. The growth rate of revenue from admission fees/commercial passes is expected to be in line with expected growth of passenger traffic (PAX)
Car parking	Revenue from car parking has been estimated based on terms of contracts awarded till date. The existing terms of the contract allow for PAX based escalation of 5-15%. Car parking revenue is expected to decelerate by 20% from the pre Covid-19 level i.e. FY20 in FY 22 and grow at 8% y-o-y in FY23 and FY24 and at 11% y-o-y thereafter.
Rent & Services	Rental revenue other than that from aeronautical rental is expected to decelerate by 20% from the pre Covid-19 level i.e. FY20 in FY22, remain at the same level in FY23 and grow at 7.5 % p.a. y-o-y thereafter. In an attempt to rationalise the land rental rates at par with the other airports, no escalation is proposed in rent & services for FY23
Trading concession	Revenue from Trading Concessions including restaurant, T.R Stalls, Hoarding & Display, etc. is expected to decelerate by 25% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 11% y-o-y in FY23 and FY24 and at 9% y-o-y thereafter. The growth rate of revenue from trading concessions is expected to be in line with expected growth of passenger traffic (PAX).
In Flight Catering Charges	Revenue from in-flight catering charges is expected to decelerate by 10% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 11% y-o-y in FY23 and FY24 and at 9% y-o-y thereafter. The growth rate of revenue from in-flight catering charges is expected to be in line with expected growth of passenger traffic (PAX)

### 10. Passenger Traffic, Air Traffic Movements (ATMs) & Cargo Forecast

The traffic forecasts of PAX, ATMs and Cargo for the 2<sup>nd</sup> control period are tabulated below.

Passenger Traffic in Lakhs	FY22	FY23	FY24	FY25	FY26
Domestic passenger traffic	20.9	23.2	25.8	28.1	30.6
y-o-y growth		11.0%	11.0%	9.0%	9.0%
CAGR FY22-FY26	7.9%				
International passenger traffic	1.1	1.2	1.4	1.5	1.6
y-o-y growth		11.0%	11.6%	8.9%	8.8%
CAGR FY22-FY26	8.0%				
Overall passenger traffic	22.0	24.4	27.1	29.6	32.2
y-o-y growth		11.0%	11.0%	9.0%	9.0%
CAGR FY22-FY26	7.9%				

Air Traffic Movements in #	FY22	FY23	FY24	FY25	FY26
Domestic Air Traffic Movements	15,774	17,352	19,087	20,423	21,853
y-o-y growth		10.0%	10.0%	7.0%	7.0%
CAGR FY22-FY26	6.7%				
International Air Traffic Movements	715	786	865	925	990
y-o-y growth		10.0%	10.0%	7.0%	7.0%
CAGR FY22-FY26	6.7%				
Overall Air Traffic Movements	16,489	18,138	19,952	21,348	22,843
y-o-y growth		10.0%	10.0%	7.0%	7.0%
CAGR FY22-FY26	6.7%				

Cargo Traffic in MT	FY22	FY23	FY24	FY25	FY26
Overall domestic cargo	9831.8	10815.0	11896.5	13086.1	14394.7
y-o-y growth		10.0%	10.0%	10.0%	10.0%
CAGR FY22-FY26	7.9%				
Overall international cargo	536.0	786.1	864.7	925.2	990.0
y-o-y growth		46.7%	10.0%	7.0%	7.0%
CAGR FY22-FY26	13.1%				
Overall Cargo	10367.8	11601.0	12761.1	14011.3	15384.7
y-o-y growth		11.9%	10.0%	9.8%	9.8%
CAGR FY22-FY26	8.2%				

## 11. Taxation

In first control period, CHIAL computed the tax as per Clause 5.5.1 and Clause 5.5.2 of the Airport Guidelines, which states that:

*"Taxation represents payments by the Airport Operator in respect of corporate tax on income from assets/ amenities/ facilities/ services taken into consideration for determination of Aggregate Revenue Requirement."*

*"The Authority shall review forecast for corporate tax calculation with a view to ascertain inter alia the appropriateness of the allocation and the calculations thereof."*

It further stated that any interest payments, penalty, fines and other such penal levies associated with corporate tax, shall not be taken into consideration as expenditure or cost.

Keeping in mind the above observations of the Authority, CHIAL has computed MAT and normal tax as per current tax law and also considered the carried forward business losses and unabsorbed depreciation as per act. In tax calculation the MAT paid by the company and credit of the same has been considered in accordance with the law.

CHIAL has computed tax for the company as a whole and actual tax payable has been allocated in the ratio of Aeronautical and Non-Aeronautical PBT.

Following are the details of actual tax for the 2<sup>nd</sup> control period:

Income Tax in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Book PBT	3,736.7	4,182.7	4,656.3	4,645.7	4,784.0
Add: Book depreciation	2,527.4	2,731.8	2,951.7	3,472.0	3,872.0
Less: Tax depreciation	(3,403.8)	(3,638.8)	(3,876.1)	(4,800.8)	(5,370.3)
Tax PBT	2,860.3	3,275.7	3,731.9	3,316.9	3,285.7
Tax PBT post Business Loss set-off	2,860.3	3,275.7	3,731.9	3,316.9	3,285.7
Usage of Unabsorbed depreciation	(2,004.0)	-	-	-	-
Taxable income @ 29.12%	856.2	3,275.7	3,731.9	3,316.9	3,285.7
Income Tax	249.3	953.9	1,086.7	965.9	956.8
Effective tax rate on PBT	6.7%	22.8%	23.3%	20.8%	20.0%

Aero tax has been computed on profit from aero revenue only. CHIAL's effective tax rate after considering the impact of benefit from unabsorbed tax losses and unabsorbed depreciation has been applied to the profit before tax pertaining to Aero services i.e. Aero PBT.

Aero Tax in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Aero Revenues	7,594.7	8,393.7	9,334.9	10,141.6	11,021.5
Aero Opex	(3,268.4)	(3,579.6)	(3,976.9)	(4,475.8)	(5,036.7)
Aero Depreciation	(2,233.5)	(2,478.9)	(2,684.1)	(3,116.9)	(3,506.4)
Aero PBT	2,092.8	2,335.2	2,673.9	2,549.0	2,478.4
Tax rate	6.7%	22.8%	23.3%	20.8%	20.0%
Aero Tax	139.6	532.6	624.1	530.0	495.7

**12. Aggregate Revenue Requirement**

The computation of Aggregate Revenue Requirement for the 2<sup>nd</sup> control period is as under:

<b>Aggregate Revenue Requirement in INR Lakhs</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>
Opening RAB excluding land	34,949.7	38,135.7	39,561.7	43,422.3	50,456.7
Closing RAB excluding land	38,135.7	39,561.7	43,422.3	50,456.7	55,513.8
<b>Average RAB excluding land</b>	<b>36,542.7</b>	<b>38,848.7</b>	<b>41,492.0</b>	<b>46,939.5</b>	<b>52,985.2</b>
FRoR	15%	15%	15%	15%	15%
Return on the net block	5,481.4	5,827.3	6,223.8	7,040.9	7,947.8
Operating expense	3,268.4	3,579.6	3,976.9	4,475.8	5,036.7
Depreciation for the period	2,233.5	2,478.9	2,684.1	3,116.9	3,506.4
Aero Tax	139.6	532.6	624.1	530.0	495.7
Return on land cost	4,111.6	4,111.6	4,111.6	4,111.6	4,111.6
True - up adjustment for previous control period	73,098.9				
<b>Aggregate revenue requirement (ARR)</b>	<b>88,333.4</b>	<b>16,530.0</b>	<b>17,620.4</b>	<b>19,275.1</b>	<b>21,098.1</b>
Non Aero income	2,345.9	2,556.3	2,817.4	3,067.5	3,339.9
Non Aero- Subsidization	703.8	766.9	845.2	920.2	1,002.0
<b>Net Aggregate revenue requirement (NARR)</b>	<b>87,629.7</b>	<b>15,763.1</b>	<b>16,775.2</b>	<b>18,354.9</b>	<b>20,096.2</b>
Projected Aero revenue	7,594.7	8,393.7	9,334.9	10,141.6	11,021.5
Discount rate	15%	15%	15%	15%	15%
Discounting period	1.0	2.0	3.0	4.0	5.0
Discount factor	0.9	0.8	0.7	0.6	0.5
NPV of Net Aggregate revenue requirement	76,199.7	11,919.2	11,030.0	10,494.5	9,991.4
NPV of Project revenue	6,604.1	6,346.9	6,137.9	5,798.5	5,479.6
<b>Shortfall carried forward to next control period</b>					<b>89,267.7</b>

### 13. Aero Revenue

The forecast of various components of aeronautical revenue streams for the 2<sup>nd</sup> control period are as under

Aeronautical revenue in INR Lakhs	FY22	FY23	FY24	FY25	FY26
Parking and housing revenue	5.6	6.1	6.7	7.2	7.7
User Development Fees	6,826.5	7,577.5	8,411.0	9,168.0	9,993.1
Extension of Watch Hours	0.3	0.4	0.4	0.4	0.5
Baggage Reconciliation System Charges	33.9	37.6	41.7	45.5	49.6
Common User Terminal Equipment Charges	186.2	195.5	205.2	215.5	226.3
Revenue share from GH operators	99.4	89.4	80.5	72.4	65.2
Handling charge of Non schedule ATM	53.4	58.7	64.6	69.1	74.0
Cargo Revenue	64.2	71.8	79.0	86.7	95.2
Aero Rent & Services- Land Refueling station	325.3	325.3	349.7	375.9	404.1
Aero Rent from new facilities	-	31.5	96.1	100.9	105.9
<b>Total Aeronautical Revenue</b>	<b>7,594.7</b>	<b>8,393.7</b>	<b>9,334.9</b>	<b>10,141.6</b>	<b>11,021.5</b>

The assumptions made for projecting each source of aeronautical revenue are as under

#### 13.1. Parking and housing revenue

Revenue from parking and housing has been projected to decelerate by 37% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 10% y-o-y in FY23 and FY24 and at 7% y-o-y thereafter. The growth rate is expected to be in line with expected growth of Air Traffic Movement (ATM). The rates approved in the 1<sup>st</sup> control period have been considered for this control period as well.

#### 13.2. User Development Fees (UDF)

The proportion of total passengers from whom User Development Fees (UDF) is chargeable (departing) has been considered to be 50% both for international and domestic.

Passenger traffic for UDF in Lakhs	FY22	FY23	FY24	FY25	FY26
Domestic PAX Up to 165 Nautical Miles (33.7% of total domestic departing PAX)	3.5	3.9	4.3	4.7	5.2
Domestic PAX Above 165 Nautical Miles (66.3% of total domestic departing PAX)	6.9	7.7	8.5	9.3	10.1
International PAX	0.5	0.6	0.7	0.7	0.8

The rates for user development fees in the 1<sup>st</sup> control period for Domestic Passenger (Up to 165 Nautical Miles), Domestic Passenger (Above 165 Nautical Miles), International Passenger have been proposed to be increased by 28%, 7.7% and 3.3% respectively to meet the inflation over the period of 5 years in the 2<sup>nd</sup> control period. The rates per departing passengers are as per the following table

Domestic Passenger (Up to 165 Nautical Miles)	320 per departing passenger
Domestic Passenger (Above 165 Nautical Miles)	700 per departing passenger
International Passenger	1,550 per departing passenger

Accordingly, revenue from UDF is expected to increase by 3.4% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 11% y-o-y in FY23 and FY24 and at 9% y-o-y thereafter. The growth rate of revenue is in line with expected growth of passenger traffic (PAX) and the aforementioned increase in rate.

**13.3. Extension of Watch Hours**

Revenue from Service charges for extension of Air Traffic Control (ATC) watch hours beyond designated watch hours has been projected to decelerate by 10% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 10% y-o-y in FY23 and FY24 and at 7% y-o-y thereafter. The growth rate of revenue from extension of watch hours is expected to be in line with expected growth of Air Traffic Movement (ATM).

**13.4. Baggage Reconciliation System Charges**

Revenue from charges levied on Baggage Reconciliation System Charges is expected to decelerate by 10% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 11% y-o-y in FY23 and FY24 and at 9% y-o-y thereafter. The growth rate of revenue from Baggage Reconciliation System Charges is expected to be in line with expected growth of passenger traffic (PAX)

**13.5. Common User Terminal Equipment Charges**

In order to overcome space and time constraints, CHIAL provides adequate number of common user terminal equipment (CUTE). The revenue generated by charges levied on use of common user terminal equipments like Check-Ins etc has been projected to decelerate by 10% from the pre Covid-19 level i.e. FY20 in FY22 and grow at 5% y-o-y thereafter.

**13.6. Revenue share from GH operators**

In light of the modification of ground handling policy as notified by DGCA vide notification No. 10/2018 dated 25 Oct 2018, CHIAL's Third Party Ground Handling revenues shall be impacted. It is reasonable to expect that airlines would find it cost efficient to self-handle and this will result in reduction of revenue share income to CHIAL from such Third Party ground handler. Accordingly, CHIAL revenues from Third Party Ground Handling have been adjusted. CHIAL has projected Revenue share from Ground handling operators to degree by 10% from the pre Covid-19 level i.e. FY20 in FY22 and subsequently degree at 10% p.a. y-o-y thereafter.

The relevant extract from the aforementioned notification is given below

"(a) all domestic scheduled airline operators and scheduled helicopter operators will be free to carry out self-handling at all airports including Civil Enclaves.

(b) A foreign airline may undertake self-handling in respect of passenger and baggage handling activities excluding security functions listed out in Para 1 of AVSEC Order 03/2009 at the airport Terminals restricted to the passenger check-in at pre security hold area, at all the airports except Civil Enclaves or Joint User Defense Airfields."

**13.7. Handling charge of Non schedule ATM**

Revenue from handling charge of Non schedule ATM is estimated to be INR 53.4 Lakhs in FY22 considering non schedule traffic at 6.7% and 0.6% of total domestic ATM and international ATM respectively. The handling charges per ATM have been taken to be INR 5,000 per non-scheduled domestic ATM and INR 15,000 per non-scheduled international ATM. The same is projected grow at 10% y-o-y in FY23 and FY24 and at 7% y-o-y thereafter. The growth rate is expected to be in line with expected growth of Air Traffic Movement (ATM) and no escalation in the handling charge per ATM is proposed.

**13.8. Cargo Revenue**

Revenue from cargo services is expected grow by 16% in FY22 from that in FY20, at 12% y-o-y p.a. in FY23 and at 10% p.a. y-o-y thereafter. The growth rate of cargo revenue is expected to be in line with expected growth of overall Cargo traffic.

**13.9. Aero Rent & Services- Land Refueling Station**

Revenue from aeronautical rent & services is expected to decelerate by 20% from the pre Covid-19 level i.e. FY20 in FY22, remain at the same level in FY23 and grow at 7.5% p.a. y-o-y thereafter. In an attempt to



rationalise the land rental rates at par with the other airports. no escalation is proposed in rent & services for FY23.

#### 13.10. Aero Rent from new facilities

The aeronautical revenue in FY23 expected from the proposed capital expenditure in FY22 upon capitalisation in FY23 is estimated to be INR 31.5 Lakhs. The additional aeronautical revenue in FY24 expected from the proposed capital expenditure for Hanger work in FY23 is estimated to be INR 63 Lakhs upon capitalisation in FY24. The annual rental is expected to increase y-o-y at 5% for the 2<sup>nd</sup> control period.

## 14. Abbreviations

1 <sup>st</sup> Control Period	The period starting from 1 April 2016 to 31 Mar 2021
2 <sup>nd</sup> Control Period	The period starting from 1 April 2021 to 31 Mar 2026
AAI	Airport Authority of India
AERA or the Authority	Airport Economic Regulatory Authority of India
Aero	Aeronautical
Airport Guidelines	AERA (Terms & Conditions for determination of Tariff for Airport operators) Guidelines, 2011 dated 28 Feb 2011
AoT	Airport of Thailand PCL
ARR	Aggregate Revenue Requirement
ATM	Air Traffic Movement
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditure
CHIAL	Chandigarh International Airport Limited
CISF	Central Industrial Security Force
CWIP	Capital Work in Progress
FRoR	Fair Rate of Return
FY	Financial year
GMADA	Greater Mohali Area Development Authority
GH	Ground Handling
HUDA	Haryana Urban Development Authority
INR	Indian Rupees
MAHB	Malaysia Airports Holding Berhad
MIAL	Mumbai International Airport Limited
MT	Metric Ton
MYTP	Multi Year Tariff Proposal
O&M	Operation & maintenance
Opex	Operating Expenditure
p.a.	Per annum
PAX	Passenger(s)
PBT	Profit Before Tax
RAB	Regulated Asset Base
UDF	User Development Fee
Y-o-y	Year on year