

फा.सं. ऐरा/20010/एमवाईटीपी /ए.आई./चेन्नई/सी.पी-दो/2016-17

भारतीय विमानपत्तन आर्थिक विनियामक प्राधिकरण

ऐरा भवन, प्रशासनिक कॉम्पलेक्स,

सफदरजंग एयरपोर्ट,

नई दिल्ली -110003

दिनांक : 19 फरवरी, 2017

विषय- चेन्नई अंतरराष्ट्रीय हवाई अड्डे, चेन्नई में दूसरी नियंत्रण अवधि (01.04.2016-31.03.2021) हेतु एयरोनॉटिकल टैरिफ निर्धारण के संबंध में।

.....

उपर्युक्त विषय पर दिनांक 19.02.2018 का परामर्श पत्र संख्या 45/2017-18 सूचना के लिए संलग्न है।

उपरोक्त परामर्श पत्र पर हितधारकों से लिखित साक्ष्य-आधार राय, टिप्पणियां और सुझाव प्रस्तुत करने की अंतिम तिथि 12.03.2018 हैं।

भवदीय,



(निर्मल कुमार)

वरिष्ठ प्रबंधक

संलग्न

1. उपरोक्त परामर्श पत्र संलग्न।

File No. AERA/20010/MYTP-AAI-Chennai/CP-II/16-17

Consultation Paper No. 45/2017-18



Airports Economic Regulatory Authority of India

**In the matter of determination of aeronautical tariffs
in respect of Chennai International
Airport, Chennai for the second Control Period
(01.04.2016 – 31.03.2021).**

19th February, 2018

**AERA Building
Administrative Complex
Safdarjung Airport
New Delhi – 110 003**

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1. Introduction

1.1. Chennai is the capital city of the state of Tamil Nadu. It is located on the Coromandel Coast off the Bay of Bengal. It is the administrative, cultural, educational and economic centre of southern India. More than one third of India's automobile industry is based in Chennai. Other than automobile industry, Chennai also has presence of IT industry, hardware manufacturing and healthcare sector. Many foreign as well as domestic tourists visit the city for the purpose of health tourism.

1.2. Chennai International Airport (CIA), managed by Airports Authority of India (AAI), is the fourth busiest airport in the country as per FY 2016-17 traffic.

1.3. The traffic handled by CIA during the 1st control period is given in table below:

Table 1 - Passenger and ATM traffic during the 1st control period at CIA

Year	Dom. Pax (mn)	Int. Pax (mn)	Total Pax (mn)	Dom. ATMs	Int. ATMs	Total ATMs
2012	8.6	4.3	12.9	86,592	33,535	120,127
2013	8.3	4.5	12.8	83,316	34,102	117,418
2014	8.4	4.5	12.9	86,549	35,268	121,817
2015	9.6	4.7	14.3	87,761	34,616	122,377
2016	10.3	4.9	15.2	89,767	35,355	125,122

1.4. CIA, with a traffic of more than 1.5 mppa, is a major airport as defined in Section 2 (i) of AERA Act. Accordingly, tariff determination of aeronautical services at the airport is undertaken by AERA.

1.5. Technical and Terminal building details of CIA are provided in the table below:

Table 2 – Technical and Terminal building details of CIA

Technical Details of CIA	
Particulars	Details
Total airport area	1301 acres
Runway orientation and length	Primary: 07/25 – 3658 x 45 M; Secondary: 2890 x 45M
No. of Taxi Tracks	24
No. of Apron Bays	86 bays
Aerodrome Category	Code 4E
Navigational Aids	DVOR/ DME, ASR, MSSR, ILS, ASMGCS
Operational hours	24 bays

Terminal building Details				
Particulars	T-1	T-2*	T-3	T-4
Terminal Building Area	73,714 sq. m.	18,858 sq. m.	60,848 sq. m.	64,204 sq. m.
Immigration Counters	-	-	18	22
Customs Counters	-	-	9	4
Security Counters	18	-	-	12
Departure Conveyor	4	-	-	4
Arrival Conveyor	4	-	6	3
Peak hour passenger capacity	3300 pax	2060 pax	2150 pax	2300 pax
No. of Check-in Counters (CUTE)	52	-	-	60
Total Area of Car Parking	49,934 sq. m.			

* – Housing the Chennai Airport project offices, Rest rooms, staff canteen, Bed and bath facilities, Flemingo warehouse & TFS kitchen

1.6. The Authority, vide its Order No. 38/2012-13 dated 01.02.2013 had decided to determine the aeronautical tariffs to be levied at CIA for the first control period with effect from 01.03.2013. Major decisions of the Authority in its Order No. 38/2012-13 are provided below:

1.6.1. The Authority decides to consider the project cost of ₹ 2,862.7 crores for the purpose of the current tariff determination

1.6.2. The Authority decides to consider Initial RAB at ₹ 343.5 crores as furnished by AAI

1.6.3. The Authority decides that depending on the capex incurred and timing thereof (i.e. the date of capitalisation of the underlying assets in a given year) the Authority will make appropriate adjustments to the RAB at the beginning of the next Control Period, taking into account, the accounting policies of AAI regarding depreciation as well as actual expenditure incurred and capitalized

1.6.4. The Authority decides to true up the traffic volume based on actual growth during the current control period while determining aeronautical tariffs for the next control period commencing w.e.f. 01.04.2016

1.6.5. The Authority may consider the non-aeronautical revenues during the current control Period as a floor for the next Control Period

1.6.6. The Authority decides to true up the non-aeronautical revenue for the current

control period based on the actual non-aeronautical revenue at CIA while determining the tariffs for the next Control Period

1.6.7. The Authority decides to consider WACC at 14% for CIA for the first Control Period

1.6.8. The Authority determines the present value of the Yield per passenger at ₹ 296.29 (as at Table 16) for the first Control Period based on its examination of the MYTP submitted by AAI

1.6.9. The Authority determines the tariffs for the Tariff Years 2012-13 to 2015-16 for aeronautical services in respect of Chennai Airport. The tariffs for FY2012-13 would be effective from 01.03.2013. The tariffs for the Tariff Years 2013-14, 2014-15 and 2015-16 will be effective from 1st April of the respective Tariff Years

1.6.10. The Authority decides to merge the passenger facility component (presently ₹ 77 per departing passenger) of the Passenger Service Fee, in the UDF. Thus, the PSF at CIA, Chennai will be limited only to the Security Component w.e.f. 01.03.2013 (presently ₹ 130 per departing passenger)

2. Methodology for Tariff determination

- 2.1. The Authority, vide its Order No. 13/2010-11 dated 12.01.2011 (“Airport Order”) and Direction No. 5/2010/11 dated 28.02.2011 (“Airport Guidelines”), had issued guidelines to determine tariffs at major airports based on Single Till mechanism. Subsequently, the Authority has amended guidelines vide its Order No. 14, 2016-17 dated 12.01.2017 to determine future tariffs using Hybrid Till.
- 2.2. The tariff determination process consists of true-up for 1st control period and determination of building blocks for 2nd control period. The Authority proposes to undertake true-up of 1st control period based on actual financials and traffic data under Single Till (as was applicable during 1st control period) and determination of building blocks for 2nd control period under Hybrid Till.
- 2.3. The Aggregate Revenue Requirement (ARR) under regulatory framework of Authority is calculated as under

$$ARR = \sum_{t=1}^5 (ARR_t) \text{ and}$$
$$ARR_t = (FRoR \times RAB_t) + D_t + O_t + T_t - \alpha \times NAR_t$$

Where

- 2.3.1. t is the Tariff Year in the control period;
- 2.3.2. ARR_t is the Aggregate Revenue Requirement for year t;
- 2.3.3. FRoR is the Fair Rate of Return for the control period;
- 2.3.4. RAB_t is the Aeronautical Regulatory Asset Base for year t;
- 2.3.5. D_t is the Depreciation corresponding to the Aeronautical RAB for year t;
- 2.3.6. O_t is the Aeronautical Operation and Maintenance Expenditure for year t, which include all expenditures incurred by the Airport Operator(s) towards aeronautical activities including expenditure incurred on statutory operating costs and other mandatory operating costs;
- 2.3.7. T_t is the Tax in year t, which includes payments by Airport Operator in respect of corporate tax on income from assets/ amenities/facilities/services taken into consideration for determination of ARR for year t;
- 2.3.8. α is 30% cross subsidy factor for revenue from services other than aeronautical services under Hybrid Till for 2nd control period. α is 100% cross

subsidy factor under Single Till for 1st control period; and

2.3.9. NAR_t is the revenue from services other than aeronautical services (Non-Aeronautical Revenues or NAR) for year t.

2.4. Based on ARR, Yield per Passenger is calculated as per formula given below:

$$\text{Yield per Passenger (Y)} = \frac{\sum_{t=1}^5 PV(ARR_t)}{\sum_{t=1}^5 (VE_t)}$$

Where,

2.4.1. Present value (PV) of ARR_t for a tariff year t is calculated at the beginning of the control period and the discounting rate for calculating PV is equal to the Fair Rate of Return determined by the Authority.

2.4.2. VE_t is the Traffic volume in a tariff year t as estimated by the Authority

2.4.3. ARR_t is the Aggregate Revenue Requirement for tariff year t.

2.5. While determining building blocks and ARR for CIA, Authority proposes to-

2.5.1. Allocate CHQ/ RHQ overhead expenses on revenue basis as per the approach followed by the Authority while determining tariffs for Guwahati and Lucknow airports during 1st control period

2.5.2. Adopt depreciation rates consistent with Companies Act and for assets not defined in the Companies Act at 3.33% from FY 2011-12 onwards.

2.6. The Authority caps airport tariffs at a level where revenue generated through approved tariffs is equal to the permissible ARR for the Airport Operator. The Authority's approach on the above is detailed in subsequent sections.

2.7. The true-up for 1st control period and determination of building blocks for 2nd control period are detailed in subsequent sections.

2.8. It is to be noted that some of the numbers in the order are rounded off for ease in representation.

3. Multi Year Tariff Proposal

- 3.1. In the 1st control period, the Authority, vide its Order No. 38/2012-13 dated 01.02.2013 had decided to determine the Aggregate Revenue Requirement (ARR) for CIA taking into account the investments and costs for both the airport services as well as cargo services. Accordingly, the Authority determined the tariffs for aeronautical services provided at CIA with tariffs effective from 01.03.2013.
- 3.2. AAI made submissions dated 09.03.2016 to the Authority for determination of tariffs for 2nd control period. Subsequent to the announcement of National Civil Aviation Policy, AAI made revised submissions under Hybrid Till on 18.04.2017. AAI has further revised their submission under Hybrid Till on 26.08.2017 and 04.09.2017 as part of clarifications submitted by AAI for the 2nd control period. AAI has not considered cargo related revenues, expenses and assets in the MYTP for 2nd control period and submitted that AAI Cargo Logistics and Allied Services Company Limited (AAICLAS) would file proposal for cargo tariffs for 2nd control period. The Authority has adopted the model proposed by AAI based on AERA methodology as on 18.04.2017 and considered subsequent submissions for this consultation paper.
- 3.3. AAI provides Air Navigation Services (ANS) in addition to landing, parking and other aeronautical services at CIA. AAI has submitted that the tariff proposal does not consider revenues, expenditure and assets on account of ANS. This consultation paper discusses the determination of tariffs for aeronautical services at the airport excluding ANS services.
- 3.4. AAI has informed that accounts of AAI are audited by C&AG of India as mandated by the AAI Act. The C&AG's resident audit party audits the financial records and statements of AAI airports, regional/ field offices. However, the C&AG issues the final audit certificate for the AAI as a whole and only trial balance is available for CIA. The Authority has utilized these documents as submitted by AAI for determination of tariffs.

4. True-up for First control period

4.1. True-up for 1st control period is calculated as difference between

4.1.1. Permissible aeronautical revenue calculated based on actual traffic and financials

4.1.2. Actual aeronautical revenue received by AAI for 1st control period

4.2. AAI has submitted opening RAB for the 1st control period under Single Till at ₹ 343.5 crores.

Table 3 – Opening RAB for the 1st control period as per AAI – Single Till

S. No.	Particulars	Amount (₹ crore)
1	Original Cost of Airport Assets excluding ANS related assets as on 01.04.2011	788.5
2	Accumulated Depreciation as on 01.04.2011	445.0
3	Opening RAB[(1)-(2)] as on 01.04.2011	343.5

Permissible aeronautical revenues

4.3. AAI has calculated Aggregate Revenue Requirement of ₹ 3,264.4 crores (PV of ARR is ₹ 2,416.9 crores as on 1st April 2012) for 1st control period.

Table 4 - ARR as per AAI for the 1st control period – Single Till

Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
Opening RAB	343.5	449.9	1,696.8	1,611.5	1,833.9
Assets capitalized during the year	188.0	1,454.3	129.4	495.4	47.2
Disposals/ Transfer	0.0	0.0	0.0	0.0	0.0
Depreciation	81.6	207.4	214.8	272.9	272.2
Closing RAB	449.9	1,696.8	1,611.5	1,833.9	1,608.9
Average RAB	396.7	1,073.4	1,654.2	1,722.7	1,721.4
Return on Average RAB@14%	55.5	150.3	231.6	241.2	241.0
Operating Expenditure	256.5	285.4	317.0	408.8	411.7
Depreciation	81.6	207.4	214.8	272.9	272.2
Corporate Tax	122.2	56.0	114.4	142.5	185.6
Less- Revenue from services other than Regulated services	164.0	185.3	177.4	222.7	254.8
ARR as per AAI	351.9	513.7	700.4	842.7	855.7
Total ARR as per AAI	3,264.4				
Discounted ARR	351.9	450.6	538.9	568.8	506.6
PV of ARR for the control period as on 01.04.2012	2,416.9				

Actual aeronautical revenues

4.4. AAI has submitted that it has earned aeronautical revenues of ₹ 3,140.9 crores during the 1st control period. Correspondingly, AAI has submitted that it has a shortfall of ₹ 150.4 crores (future value as on 01.04.2017) during the 1st control period. The aeronautical revenues for the 1st control period is shown below:

Table 5 - Aeronautical revenue earned for the 1st control period as per AAI Submission – Single Till

No.	Particulars (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
A	Revenues from Regulated Services					
1	Landing Charges:					
1.1	Domestic	55.1	59.9	90.2	92.4	97.4
1.2	International	63.6	64.5	143.5	157.8	173.7
1.3	Total Landing Charges	118.8	124.4	233.7	250.2	271.2
2	Parking and Housing Charges:	3.4	3.9	6.6	5.9	6.2
3	PSF(Facilitation Charges(FC)):					
3.1	Domestic	33.1	29.9	6.5	0.0	0.0
3.2	International	18.1	16.6	10.6	0.0	0.0
3.3	Total PSF (FC)	51.2	46.5	17.1	0.0	0.0
4	User Development Fees (UDF):					
4.1	Domestic	0.0	0.0	52.5	67.9	75.1
4.2	International	0.0	0.0	57.1	170.3	175.0
4.3	Total UDF	0.0	0.0	109.6	238.2	250.2
5	Fuel Throughput Charges	80.9	76.5	82.0	85.1	88.4
6	Ground Handling Charges	30.7	28.9	34.0	35.1	37.8
7	Cargo revenues	177.5	140.5	153.1	153.5	159.0
8	CUTE services	0.0	2.4	10.7	11.7	16.0
	Total Aeronautical Revenues	462.6	423.1	646.9	779.7	828.7

Table 6 - ARR and its resultant shortfall as per AAI for 1st control period – Single Till

No.	Components (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16	Total
1	ARR for year	351.9	513.7	700.4	842.7	855.7	3,264.4
2	Aeronautical Revenue	462.6	423.1	646.9	779.7	828.7	3,140.9
3	Shortfall (+)/ Excess (-)	-110.7	90.6	53.5	63.0	27.0	123.5
4	Future Value of shortfall (+)/ excess (-) as on 01.04.2017	-242.9	174.5	90.3	93.4	35.1	150.4

Authority's Examination

4.5. The Authority proposes adjustments on the following building blocks for calculating true-up of 1st control period

- 4.5.1. Adjustment of accumulated depreciation upto 01.04.2011
- 4.5.2. Adjustment of capital additions of 1st control period
- 4.5.3. Adjustment of depreciation
- 4.5.4. Adjustment of non-aeronautical revenues
- 4.5.5. Apportionment of CHQ/RHQ costs and change in tax calculation
- 4.5.6. Correction of present value factor for shortfall/ excess calculation

Adjustment of accumulated depreciation upto 01.04.2011

4.6. AAI has used depreciation rates as per the accounting policy approved by AAI board to determine the accumulated depreciation upto 01.04.2011. However, the Authority noted that there were calculation mistakes in the determination of the accumulated depreciation upto 01.04.2011 for various airport assets. The Authority requested AAI to review these calculations and provide the revised accumulated depreciation upto 01.04.2011. Subsequently, AAI vide their submissions dated 26.08.2017, 04.09.2017 and 12.10.2017 submitted the revised accumulated depreciation amounts upto 01.04.2011. The Authority proposes to revise the accumulated depreciation upto 01.04.2011 to ₹ 458.6 cr. from ₹ 445.0 cr. as per AAI's submissions.

Adjustment of capital additions of 1st control period

4.7. The Authority observed that the arrival level of Terminal 4 is not being utilized by AAI. Terminal 4 handles the international operations at CIA. Since the asset is not being

utilized by AAI, the Authority proposes to exclude the capital additions incurred with respect to the value of assets in the arrival section in Terminal 4.

4.8. AAI vide their submission dated 08.12.2017 and 19.01.2018 provided the total cost of Terminal 4 capitalized in FY 2012-13 and FY 2013-14 and in addition submitted that the assets of Terminal 2 and Terminal 3 have been fully depreciated. AAI also submitted on 08.12.2017 and 19.01.2018 that approximately 80% of Terminal 4 area was being utilized by AAI.

4.9. The Authority noted that AAI has not provided details of area-wise usage (that is area allocated and its utilization for departure, immigration, customs, security hold, arrival, non-aeronautical, office spaces, etc.) of Terminal 4. It is not clear from AAI's response whether the said area in Terminal 4 is being used for intended purposes or for other commercial or non-airport purposes.

4.10. Since the usage of arrival area is not clear and it is not known whether the area is being completely used for intended purpose of handling passengers, the Authority proposes to consider 50% of the Terminal 4 area as unutilized as departure area is being fully utilized. Accordingly, the Authority proposes to exclude 50% of the capital expenditure incurred for construction of Terminal 4 while truing-up of the 1st control period and tariff determination of the 2nd control period as per the table below.

Table 7 – Adjustment of capital expenditure due to non-utilization of Terminal 4

in ₹ cr.	FY 2012-13	FY 2013-14	Total
Total Terminal 4 cost (civil, electrical and electronics)	214.4	106.5	320.9
Capital Cost of Terminal 4 considered for true up of 1st control period and tariff determination of 2nd control period	107.2	53.2	160.5
Reduction in capital expenditure of 1st control period due to such exclusion	107.2	53.2	160.5

Adjustment for Depreciation

4.11. AAI has used depreciation rates as per the accounting policy approved by AAI Board.

The depreciation rates used by AAI for key assets are –

Table 8 - Depreciation rates as submitted by AAI

No.	Asset Class	As per AAI
1	Land	0%
2	Runways, Taxiways, Aprons	13%
3	Roads, Bridges & culvert	13%
4	Terminal/Other Buildings	8%
5	Cargo Building	8%
6	Temporary Buildings	100%
7	Building – Residential	5%
8	Security Fencing	100%
9	Boundary wall (operational)	8%
10	Other Buildings – Unclassified	8%
11	Computer, IT Hardware & Access.	20%
12	Computer Software	20%
13	Plant and Machinery	11%
14	Tools & Equipments	20%
15	Office Furniture & Fixtures	20%
16	Other Vehicles	14%
17	Electrical Installations	11%
18	Office Equipments	18%
19	Furniture & Fixtures	20%
20	X-Ray Baggage	11%
21	CFT	13%
22	Boundary wall (residential)	5%

4.12. The Authority proposes the following depreciation rates

4.12.1. For asset types not defined under Companies Act (runway, taxiway and aprons): 3.33% based on useful life of 30 years from FY 2011-12 onwards

4.12.2. For asset types defined under Companies Act: rates prevalent under the Companies Act 1956 till FY 2013-14 and as per the Companies Act 2013 from FY 2014-15 onwards as the effective date of implementation of the Companies Act 2013 is 01.04.2014. The depreciation rates as submitted by AAI and as considered by the Authority are given in Table 29.

4.13. Depreciation for the 1st control period has been calculated on the basis of actual date of capitalization of assets.

4.14. The revised depreciation for the 1st control period under Single Till is given below:

Table 9 – The Authority’s consideration of depreciation for 1st control period – Single Till

No.	Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16	Total
1	As per AAI	81.6	207.4	214.8	272.9	272.2	1,048.8
2	As per Authority	24.9	61.5	63.2	135.9	136.8	422.3

4.15. AAI has taken the cost of land of ₹ 6.9 cr. in RAB. In respect of cost of land, the Authority notes that land is not a depreciable asset and if taken into RAB, the return over it has to be paid perpetually. Besides, if the principle of FRoR based on cost of capital is applied on cost of land, the aeronautical charges may have to be fixed at exorbitantly high rates. However, the Authority realizes that unless some kind of return is given on land, future land acquisitions for airport purposes could become a major hurdle for airport development. Therefore, it is proposed to conduct a study based on which the treatment to be given to cost of land can be determined.

4.16. It is therefore proposed to exclude the existing cost of land and additions (existing cost of land of ₹ 3.5 crores in FY 2011-12 and additions of ₹ 3.4 cr. in FY 2011-12) from the RAB till a final decision is taken on the issue.

4.17. Opening RAB as on 01.04.2011 has been revised on account of changes in the accumulated depreciation upto 01.04.2011 and exclusion of existing cost of land from RAB. Further, with the adjustment of capital additions, change in depreciation rates and exclusion of land cost from additions in FY 2011-12, the RAB in subsequent years of 1st control period have also been revised as shown below –

Table 10 – The Authority’s consideration of average RAB for 1st control period – Single Till

No	Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
1	As per AAI					
	Opening RAB	343.5	449.9	1,696.8	1,611.5	1,833.9
	Additions	188.0	1,454.3	129.4	495.4	47.2
	Disposals	0.0	0.0	0.0	0.0	0.0
	Depreciation	81.6	207.4	214.8	272.9	272.2
	Closing RAB	449.9	1,696.8	1,611.5	1,833.9	1,608.9
	Average RAB	396.7	1,073.4	1,654.2	1,722.7	1,721.4
2	As per Authority					
	Opening RAB	326.4	486.1	1,771.7	1,784.7	2,144.1
	Additions	184.6	1,347.1	76.2	495.4	47.2
	Disposals	0.0	0.0	0.0	0.0	0.0
	Depreciation	24.9	61.5	63.2	135.9	136.8
	Closing RAB	486.1	1,771.7	1,784.7	2,144.1	2,054.5
	Average RAB	406.3	1,128.9	1,778.2	1,964.4	2,099.3

Adjustment for Non-Aeronautical revenues

4.18. The Authority noted that AAI has considered lease rental and rent revenues from cargo, ground handling agencies and oil companies as non-aeronautical revenues during the 1st control period. As per the provisions of the AERA Act, the services rendered in respect of ground handling, oil companies and cargo are aeronautical services.

4.19. The Authority proposes to consider the revenues from Ground Handling Services and Supply of fuel to aircraft including land lease rentals as aeronautical revenue.

4.20. The Authority noted that the lease rent as per the trial balance of CIA in FY 2015-16 is ₹ 67.7 cr. which is different from the submissions of AAI for lease rent in FY 2015-16 (₹ 72.5 cr.). The Authority proposes to consider the amount of lease rent in the trial balance as per clarification provided by AAI.

Table 11 – Comparison of NAR as considered by AAI and the Authority for 1st control period

NAR (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
NAR as submitted by AAI (1)	164.0	185.3	177.4	222.7	254.8
Adjustment					
<i>Revenue from Cargo, Ground handling, fuel services treated as aeronautical and other corrections (2)</i>	11.9	12.7	21.4	41.9	49.5
NAR as per Authority (3 = 1 - 2)	152.1	172.6	156.0	180.8	205.3

Adjustment for operating expenditure (CHQ/ RHQ expenditure apportionment)

4.21. Total CHQ/ RHQ expenses for AAI is as shown in table below. AAI has requested the apportionment of CHQ/ RHQ expenses while determining tariffs of major airports. CHQ/ RHQ expenses allocation for CIA consist of two components – Expenditure for CIA employee's retirement benefit allocated at CHQ and overheads at CHQ. The CHQ expense considered for apportionment have been netted off against the income received by CHQ. For CIA, RHQ overheads of southern region has not been apportioned to CIA as it directly reports to CHQ and not to RHQ.

4.22. The retirement benefit is allocated on the basis of number of employees at CIA. The Authority proposes to allocate the CHQ overhead expenses for the airport services after excluding the ANS expenses on revenue basis which is consistent with the approach adopted by the Authority in MYTP of 1st Control Period for Guwahati and Lucknow airports. The Authority observes that as per the above methodology the CHQ overhead expenses are allocated in proportion to the capacity of the airport to absorb higher cost of CHQ. Under this methodology, a portion of CHQ expenses are allocated to Delhi and Mumbai airports based on revenue received by AAI from these airports.

Table 12 - Summary of CHQ/ RHQ Overheads as submitted by AAI for 1st control period

No.	in ₹ cr.	2012	2013	2014	2015	2016
	Apportionment of CHQ/ RHQ overheads					
1	CHQ Expenses	259.3	331.2	303.8	397.3	404.6
2	Less - CHQ Revenue	93.8	152.6	183.5	236.8	227.7
3	Net CHQ Expenses (1-2)	165.6	178.7	120.3	160.5	176.9
	CHQ/ RHQ Overheads allocated to CIA	32.5	27.1	18.8	26.8	27.2

No.	in ₹ cr.	2012	2013	2014	2015	2016
	Apportionment of Retirement Benefits at CHQ					
	Total provision of retirement benefits at CHQ	159.7	289.4	160.0	275.2	182.9
	Provision of Retirement Benefits at CHQ for CIA	17.6	37.7	18.7	32.3	20.8

4.23. The Authority also noted that AAI has included financing charges as part of O&M expenses for the 1st control period. The Authority proposes not to include interest payments on long term debt as a component of O&M expenses for true-up calculation since the financing charges would be recovered as part of the return on the RAB.

4.24. AAI vide its clarification dated 12.10.2017 submitted that the municipal tax should be considered as ₹ 0.5 cr. instead of ₹ 5.1 cr. for FY 2014-15. The Authority has accordingly revised the municipal tax expenses.

4.25. AAI vide its clarification dated 12.10.2017 revised the R&M expenditure for FY 2014-15 to ₹ 41.7 cr. from ₹ 69.9 cr.. The Authority requested AAI to provide justification for increase in R&M expenditure in FY 2014-15 and FY 2015-16. In response, AAI submitted that the reason for increase in R&M expenditure during FY 2015-16 is majorly due to i) Runway resurfacing: Civil – ₹ 11.1 cr. and Electrical – ₹ 5.9 cr., ii) CAMC-Electrical-A/c Equipment – ₹ 5.0 cr. and iii) AOCC - Amount transferred from CHQ ₹ 4.7 cr. Further, AAI submitted that the reason for increase in R&M expenditure during FY 2014-15 is majorly due to i) ₹ 0.9 cr. payment towards R&M of Inline Baggage system for New Domestic Terminal ii) ₹ 8.2 cr. provision of liability towards manpower for Handling Inline baggage by M/s. Air India and iii) ₹ 0.1 cr. - spares purchased for Rosanbar AFFRV. The Authority has noted AAI's response and proposes to exclude the operational expenditure in FY 2015-16 of ₹ 4.7 cr. for AOCC - Amount transferred from CHQ since AAI has not provided the details of this expenditure which is related to CHQ. Further, the Authority proposes to exclude ₹ 8.2 cr. for provision of liability towards manpower for handling inline baggage by Air India from operational expenditure of FY 2014-15 since doubtful debts are not allowed under operational expenditure.

4.26. In view of the above, the O&M expenditure for 1st control period is given in table below.

Table 13 - Summary of O&M expenditure as per the Authority for 1st control period -Single Till

No.	Particulars (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
1	Pay roll Expenditure of CIA	112.9	105.6	117.9	127.4	124.6
2	Expenditure for CIA employees' retirement benefits allocated at CHQ	17.6	37.7	18.7	32.3	20.8
A	Total Pay roll Expenditure (1+2)	130.4	143.2	136.6	159.7	145.5
3	Administrative and General Expenditure	2.4	3.6	3.4	4.8	4.2
4	Apportionment of administration & General expenditure of CHQ	32.5	27.1	18.8	26.8	27.2
B	Total Administration & General Expenditure(3+4)	35.0	30.7	22.2	31.5	31.4
C	Repairs and Maintenance Expenditure	18.4	28.6	32.9	33.5	65.7
5	Power Charges	29.7	46.1	67.5	68.1	77.8
6	Water Charges	1.0	1.6	2.5	2.3	1.7
7	Outsourcing Charges	1.9	5.4	5.6	10.2	15.1
D	Utility and Outsourcing Expenditure	32.6	53.1	75.7	80.6	94.6
E	Other Outflows	40.1	29.7	14.9	8.6	17.6
	Total (A+B+C+D+E)	256.5	285.4	282.2	314.0	354.7

Adjustment in base year for calculating present value of shortfall/ excess

4.27. The Authority noted that the present value factor considered by AAI for the shortfall/ excess in aggregate revenue collection in comparison to allowable aggregate revenue for the 1st control period (refer to Table 6) is calculated as on 01.04.2017 instead of 01.04.2016. The Authority proposes to consider the present value of shortfall/ excess as on 01.04.2016.

Tax calculation for 1st control period

4.28. The tax calculation as submitted by AAI for 1st control period apportions actual tax liability of AAI based on the profit before tax of CIA and profit before tax of AAI.

4.29. The Authority noted that the tax liability of AAI would include tax as a result of income from Delhi and Mumbai airports. Therefore, the Authority proposes to determine tax for CIA by applying provisional tax rate on the standalone profit before tax of the airport. In addition, for calculation of tax, the Authority proposes to

determine depreciation considering the depreciation rates applicable under Income Tax laws.

4.30. AAI has submitted revised tax calculations based on standalone financials of CIA. The Authority proposes to consider the tax calculation as given below.

Table 14 – Revised amount of Tax as considered by Authority for the 1st control period

Particular (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
Aeronautical Revenues	474.5	435.8	668.2	821.6	873.4
Non-Aeronautical Revenues	152.1	172.6	156.0	180.8	205.3
O&M (excluding retirement benefits and CHQ/ RHQ Overheads)	206.4	220.6	244.7	254.9	306.7
Retirement benefits and CHQ/ RHQ Overheads	50.1	64.8	37.5	59.1	48.0
Depreciation as per IT Act	67.4	217.8	199.6	248.9	222.4
PBT	302.7	105.2	342.4	439.5	501.6
Tax	98.2	34.1	116.4	149.4	173.6

Revised Aggregate Revenue Requirement

4.31. The ARR for the 1st control period has been revised based on adjustments detailed above.

4.31.1. Adjustment of accumulated depreciation upto 01.04.2011

4.31.2. Adjustment of capital additions of 1st control period

4.31.3. Adjustment of depreciation

4.31.4. Adjustment of non-aeronautical revenues

4.31.5. Apportionment of CHQ/RHQ costs and change in tax calculation

4.31.6. Correction of present value factor for shortfall/ excess calculation

Table 15 - ARR as per Authority for the 1st control period – Single Till

Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
Average RAB	406.3	1,128.9	1,778.2	1,964.4	2,099.3
Return on Average RAB@14%	56.9	158.0	248.9	275.0	293.9
Operating Expenditure	256.5	285.4	282.2	314.0	354.7
Depreciation	24.9	61.5	63.2	135.9	136.8
Corporate Tax	98.2	34.1	116.4	149.4	173.6
Less- Revenue from services other than Regulated services	152.1	172.6	156.0	180.8	205.3
ARR as per Authority	284.4	366.5	554.8	693.5	753.7
Total ARR as per Authority	2,652.9				

Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
Discounted ARR	284.4	321.5	426.9	468.1	446.2
PV of ARR for the control Period as on 01.04.2012	1,947.1				

4.32. Correspondingly, the shortfall/ excess during the 1st control period between permissible aeronautical revenues and actual aeronautical revenues is calculated as below:

Table 16 - ARR, yield and shortfall/ excess as per Authority for 1st control period – Single Till

No.	Components (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16	Total
1	ARR for year (refer Table 15)	284.4	366.5	554.8	693.5	753.7	2652.9
2	Aeronautical Revenue	474.5	435.8	668.2	821.6	873.4	3273.5
3	Shortfall (+) / Excess (-)	-190.0	-69.3	-113.5	-128.1	-119.7	-620.6
4	Future Value of shortfall (+)/ Excess (-) as on 01.04.2016	-365.9	-117.1	-168.1	-166.4	-136.5	-954.0

Proposal No. 1. True-up for the 1st control period

- 1.a. The Authority proposes to true-up the 1st control period on the basis of Single Till
- 1.b. The Authority proposes to apportion CHQ/RHQ overheads on revenue basis.
- 1.c. The Authority proposes to consider the revenues from Cargo facility, Ground Handling Services and Supply of fuel to aircraft including land lease rentals as aeronautical revenue.
- 1.d. The Authority proposes the following depreciation rates.
 - a. For asset types not defined under Companies Act (runway, taxiway and aprons): 3.33% based on useful life of 30 years from FY 2011-12 onwards
 - b. For asset types defined under Companies Act: rates prevalent under the Companies Act 1956 till FY 2013-14 and as per the Companies Act 2013 from FY 2014-15 onwards as the effective date of implementation of the Companies Act 2013 is 01.04.2014. The depreciation rates as submitted by AAI and as considered by the Authority are given in Table 29.
- 1.e. The Authority proposes to consider excess of ₹ 954.0 crores in the 1st control period to be added to ARR for the 2nd control period.

5. Traffic forecast

5.1. The traffic growth rates as submitted by AAI for 2nd control period are as follows:

Table 17 - Traffic Growth rates assumed by AAI for the 2nd control period

YEAR	Passenger			Air Traffic Movements (ATM)		
	Domestic	International	Combined	Domestic	International	Combined
2016-17	18.0 %	6.0 %	14.2 %	15.0 %	4.0 %	11.9 %
2017-18	10.0 %	4.0 %	8.2 %	7.0 %	3.0 %	5.9 %
2018-19	10.0 %	4.0 %	8.3 %	7.0 %	3.0 %	6.0 %
2019-20	10.0 %	4.0 %	8.4 %	7.0 %	3.0 %	6.0 %
2020-21	10.0 %	4.0 %	8.4 %	7.0 %	3.0 %	6.0 %

5.2. AAI submitted that traffic growth rate for FY 2016-17 is based on extrapolation of actual traffic data from April, 2016 to February, 2017.

5.3. As part of clarifications provided by AAI dated 09.05.2017, AAI has revised the traffic growth rates for FY 2016-17 as per actuals for the year.

Authority's Examination

5.4. The Authority observed that the actual traffic data is available for FY 2016-17 for CIA. Accordingly, AAI submitted that traffic growth rate for FY 2016-17 can be revised by the Authority based on actual traffic during FY 2016-17. The Authority proposes to revise traffic growth rates for FY 2016-17 as per Table 19. Further, the Authority proposes to consider the actual traffic data available till December 2017 in public domain on AAI website and extrapolate it for remaining 3 months of FY 2017-18 to determine the traffic growth for FY 2017-18 which has been shown in Table 19.

5.5. The Authority calculated CAGR (Compounded Annual Growth Rate) for ATM and passenger traffic from FY 2010-11 to FY 2015-16 (5 year CAGR) and from FY 2005-06 to FY 2015-16 (10 year CAGR) for CIA. The details have been provided in table below:

Table 18 - CAGR for Traffic at CIA

	Growth rates as per AAI (FY18 to FY21)	10 Year CAGR (FY06 to FY16)	5 Year CAGR (FY11 to FY16)
Passenger			
Domestic	10.0%	9.5%	5.8%
International	4.0%	6.5%	2.8%
ATM			
Domestic	7.0%	6.5%	2.7%

	Growth rates as per AAI (FY18 to FY21)	10 Year CAGR (FY06 to FY16)	5 Year CAGR (FY11 to FY16)
Passenger			
International	3.0%	5.3%	1.9%

5.6. After evaluation of 5 and 10 year CAGR of traffic, the Authority is of the view that 10 years CAGR provides more realistic traffic growth rates for future projections of international passenger and ATM traffic. Hence, the Authority proposes to adopt growth rates for international passenger and ATM traffic from FY 2018-19 to FY 2020-21 based on 10 years CAGR.

5.7. The Authority proposes to consider the growth rate as submitted by AAI for domestic passenger and ATM traffic.

Table 19 - Traffic growth rates and Traffic as considered by Authority for the 2nd control period

YEAR	Passenger			Air Traffic Movements (ATM)		
	Domestic	International	Combined	Domestic	International	Combined
Growth Rates						
2016-17	27.2%	6.8%	20.7%	24.0%	3.1%	18.1%
2017-18	11.2%	3.8%	9.1%	2.7%	1.4%	2.4%
2018-19	10.0%	6.5%	9.0%	7.0%	5.3%	6.6%
2019-20	10.0%	6.5%	9.1%	7.0%	5.3%	6.6%
2020-21	10.0%	6.5%	9.1%	7.0%	5.3%	6.6%
Traffic						
2016-17	13,153,967	5,208,248	18,362,215	111,331	36,436	147,767
2017-18	14,626,758	5,408,155	20,034,914	114,351	36,931	151,283
2018-19	16,089,434	5,757,805	21,847,240	122,356	38,877	161,233
2019-20	17,698,378	6,130,061	23,828,439	130,921	40,926	171,847
2020-21	19,468,216	6,526,384	25,994,599	140,085	43,083	183,168

5.8. The Authority proposes to true-up traffic as per actual growth achieved during the current control period at the time of determination of tariff for 3rd control period as explained in earlier orders of the Authority.

Proposal No. 2. Traffic Forecast

2.a. The Authority proposes to consider the ATM and passenger traffic as per Table 19.

2.b. The Authority proposes to true up the traffic volume (ATM and Passengers) based on actual traffic in 2nd control period while determining tariffs for the 3rd control period.

6. Allocation of Assets (Aeronautical and Non-Aeronautical)

6.1. Under Hybrid Till, only aeronautical assets are included as part of the Regulatory Asset Base. As a result of the shift from Single Till to Hybrid Till at the end of 1st control period, the assets need to be segregated and opening RAB for 2nd control period needs to be recalculated.

6.2. For the allocation of assets between aeronautical and non-aeronautical services, AAI had divided assets into aeronautical, non-aeronautical, cargo and common components. Common components have been further segregated into aeronautical, non-aeronautical and cargo assets by applying one of the following:

6.2.1. Terminal Area Ratio - ratio of aeronautical area to non-aeronautical area (applied for Terminal related assets)

6.2.2. Employee Ratio - 87.9% share of staff providing aeronautical services (827 employees), 1.5% share of staff providing non-aeronautical services (14 employees) and 10.6% share of staff providing cargo services (100 employees) (applied to employee related assets such as computer, furniture and fixtures, etc.)

6.2.3. Vehicle Ratio – 70.9% share of vehicles providing aeronautical services (55 vehicles), 1.3% share of vehicles providing non-aeronautical services (1 vehicle) and 27.8% share of vehicles providing cargo services (22 vehicles) (applied to vehicle related assets)

6.2.4. Quarter ratio for residential building – Based on employees allotted quarters (10.8%, 8.9% and 80.3% for cargo, non-aero and aeronautical components respectively)

6.3. The allocation of gross block of assets as on 01.04.2016 as submitted by AAI is given in the table below:

Table 20 – Allocation of gross block of assets as on 01.04.2016 between aeronautical and non-aeronautical services as submitted by AAI

Sr. No.	Assets	Aero Assets (₹ crore)	Total Assets (₹ crore)	% Aero
1	Land	6.9	6.9	100%
2	Runways, Taxiways, Aprons	649.1	649.1	100%
3	Roads, Bridges & culvert	74.5	75.5	99%
4	Terminal/Other Buildings	1145.6	1232.5	93%
5	Cargo Building	12.9	64.9	20%
6	Temporary Buildings	0.9	0.9	100%
7	Building – Residential	4.8	4.8	100%
8	Security Fencing	2.6	2.6	100%
9	Boundary wall (operational)	30.1	30.1	100%
10	Other Buildings - Unclassified	37.4	39.2	95%
11	Computer, IT Hardware & Access.	14.4	14.7	98%
12	Computer Software	1.1	1.9	59%
13	Plant and Machinery	206.3	207.6	99%
14	Tools & Equipments	16.5	18.1	91%
15	Office Furniture & Fixtures	5.5	5.5	100%
16	Other Vehicles	4.1	4.1	100%
17	Electrical Installations	624.7	664.9	94%
18	Office Equipments	0.9	0.9	100%
19	Furniture & Fixtures	18.2	18.8	97%
20	X-Ray Baggage	16.1	36.4	44%
21	CFT	23.5	23.5	100%
	Total	2,896.0	3,102.8	93%

Authority's Examination

6.4. AAI submitted the workings for the calculation of aeronautical area to non-aeronautical area ratio vide letter dated 26.08.2017 and 08.11.2017.

Table 21 – Workings of Terminal Area Ratio calculation as submitted by AAI for FY 2015-16

Particulars	Total Area (sq. m.)	Area in use (sq. m.) (A)	Total commercial area (sq. m.) (B)	Non-aero to area in use ratio (%) (B/A)
Terminal 1	73,714	73,714	3,014	4.1%
Terminal 2	18,858	3,772	0	0.0%
Terminal 3	60,848	48,678	1,666	3.4%
Terminal 4	64,204	36,526	2,556	7.0%
Total	217,624	162,690	7,236	4.4%

6.5. The Authority observed that the percentage of non-aeronautical area is lower

compared to similar airports. The Authority is fully aware of the constraints in increasing the non-aeronautical area at CIA due to lack of depth in the terminal building. However, in a metro city such as Chennai, there is sufficient scope to allocate more space for non-aeronautical services at the airport. Hence, the Authority proposes to adopt 92.5% as aeronautical area for asset allocation of Terminal related assets to encourage growth of NAR which would cross-subsidize aeronautical charges.

6.6. Specific assets under Terminal Building and Other Building related to the Terminal Building have been considered as aeronautical by AAI. The Authority proposes to allocate these assets in the ratio of 92.5% to 7.5%.

6.7. Specific assets under terminal building related to shops and food court have been considered as aeronautical by AAI. The Authority proposes to consider these assets as non-aeronautical assets.

6.8. Specific assets under Other Building and Office Furniture & Fixtures related to school have been considered by AAI as aeronautical assets. The Authority proposes to allocate these assets based on employee ratio.

6.9. The Authority proposes to consider car park related assets as 100% non-aeronautical assets.

6.10. The Authority proposes to exclude the cost of hangars from aeronautical RAB.

6.11. As part of the clarifications provided dated 26.08.2017 and 12.10.2017, AAI submitted that all cargo assets, expenses and income have not been considered in the 2nd control period. As per AAI clarifications, AAI cargo logistics and allied services company limited (AAICLAS) is managing cargo activities at CIA, which is 100% subsidiary of AAI. AAICLAS would file cargo MYTP of CIA separately. As per AAI's submission dated 12.10.2017, the Authority notes that the accounts for cargo operations are now booked (FY 2017-18) under AAICLAS for CIA. Hence, the Authority decides to include Cargo assets, revenues and operational expenditure from 01.04.2016 till 31.03.2017 and decides to exclude them from 01.04.2017 till 31.03.2021 while determination of tariff in the second control period. Further, the Authority notes that there is no clarity on the transfer of cargo assets to AAICLAS as of now. The Authority will take a view on this while truing up in the 3rd control period based on the decisions taken by the AAI.

6.12. The asset allocation proposed by Authority is tabulated below:

Table 22 – Change in allocation of gross block of assets existing as on 01.04.2016 between aeronautical and non-aeronautical services excluding cargo assets proposed by the Authority

Sr. No.	Particulars	Aero Assets	Justification
1.	Runways, Taxiways, Aprons	96.8%	Total assets are ₹ 649.1 crores out of which ₹ 628.5 crores are purely aeronautical assets. Non-aeronautical assets related to hangars (₹ 20.2 crores) and Cargo related assets (₹ 0.3 crores) have been excluded from aeronautical RAB
2.	Roads bridges & culvert	96.4%	Total assets are ₹ 75.5 crores out of which ₹ 72.7 crores are purely aeronautical assets. Cargo related assets (₹ 1.5 crores) and car park (₹ 1.3 crores) have been excluded from aeronautical RAB.
3.	Terminal building	89.6%	Total assets are ₹ 1,108.3 crores out of which ₹ 200.0 crores are purely aeronautical assets and common assets are ₹ 857.3 crores which have been allocated based on 92.5% ratio towards aeronautical component based on terminal building area for terminal related assets. Cargo related assets (₹ 50.0 crores) and non-aeronautical assets (₹ 1.0 crore) have been excluded from aeronautical RAB.
4.	Cargo building	0.0%	Cargo assets of ₹ 64.9 crores are have been excluded from aeronautical RAB.
5.	Building Temporary	92.6%	Total assets are ₹ 0.9 crores out of which ₹ 0.8 crores are purely aeronautical assets. Car park related assets (₹ 0.1 crores) have been considered as non-aeronautical.
6.	Boundary Wall (Operational)	99.0%	Total assets are ₹ 30.1 crores out of which ₹ 29.8 crores are purely aeronautical assets. Cargo related assets (₹ 0.3 crores) have been excluded from aeronautical RAB.
7.	Other Buildings - Unclassified	92.6%	Total assets are ₹ 39.2 crores out of which ₹ 35.8 crores are purely aeronautical assets and common assets are ₹ 0.6 crores which have been allocated based on employee ratio. Cargo related assets (₹ 1.8 crores) and car park and hangar related assets (₹ 1.0 crores) have been excluded from aeronautical RAB.
8.	Computer, IT,	92.1%	Total assets are ₹ 14.7 crores out of which ₹

Sr. No.	Particulars	Aero Assets	Justification
	Hardware and access		12.2 crores are purely aeronautical assets and common assets are ₹ 1.6 crores which have been allocated based on employee ratio. Cargo related assets (₹ 1.0 crores) have been excluded from aeronautical RAB.
9.	Plant & machinery	92.7%	Total assets are ₹ 199.4 crores out of which ₹ 184.8 crores are purely aeronautical assets. Cargo related assets (₹ 14.5 crores) have been excluded from aeronautical RAB.
10.	Tools & Equipment	84.7%	Total assets are ₹ 18.1 crores out of which ₹ 15.4 crores are purely aeronautical assets and common assets are ₹ 0.01 crores which have been allocated based on vehicle ratio. Cargo related assets (₹ 2.8 crores) have been excluded from aeronautical RAB.
11.	Electrical installations	91.8%	Total assets are ₹ 636.8 crores out of which ₹ 582.9 crores are purely aeronautical assets and common assets are ₹ 1.6 crores which have been allocated based on terminal building and quarter ratio. Cargo related assets (₹ 49.3 crores) and non-aeronautical assets (₹ 3.0 crores) have been excluded from aeronautical RAB.
12.	Furniture & fixture	91.3%	Total assets are ₹ 18.8 crores out of which ₹ 13.5 crores are purely aeronautical assets and common assets are ₹ 4.0 crores which have been allocated based on employee, terminal building and quarter ratio. Cargo related assets (₹ 1.2 crores) and non-aeronautical assets (₹ 0.1 crores) have been excluded from aeronautical RAB.
13.	X-Ray Baggage	44.1%	Total assets are ₹ 36.4 crores out of which ₹ 16.1 crores are purely airport related aeronautical assets. Cargo related assets (₹ 20.3 crores) have been excluded from aeronautical RAB.

6.13. The cost of land has been excluded from the RAB of 2nd control period as in para 4.12.

6.14. The allocation of gross block of assets as on 01.04.2016 as considered by the Authority based on revised asset allocation is given in the table below. As per para 6.11, for the year FY 2016-17, the RAB includes the cargo assets (column % aero including

cargo). For the remainder of second control period, cargo assets have been excluded (column % aero excluding cargo).

Table 23 – Allocation of gross block of assets as on 01.04.2016 between aeronautical and non-aeronautical services as considered by the Authority

Sr. No.	Assets	Total Assets (₹ cr.)	Aero Assets including cargo (₹ cr.)	% Aero including cargo	Aero Assets excluding cargo (₹ cr.)	% Aero excluding cargo
1	Land	0.0	0.0	0.0%	0.0	-
2	Runways, Taxiways, Aprons	649.1	628.8	96.9%	628.5	96.8%
3	Roads, Bridges & culvert	75.5	74.2	98.3%	72.7	96.4%
4	Terminal/Other Buildings	1108.3	1,043.1	94.1%	993.1	89.6%
5	Cargo Building	64.9	64.9	100.0%	0.0	0.0%
6	Temporary Buildings	0.9	0.8	92.6%	0.8	92.6%
7	Building - Residential	4.8	4.8	100.0%	4.8	100.0%
8	Security Fencing	2.6	2.5	97.5%	2.5	96.3%
9	Boundary wall (operational)	30.1	30.1	100.0%	29.8	99.0%
10	Other Buildings - Unclassified	39.2	38.2	97.4%	36.3	92.6%
11	Computer, IT Hardware & Access.	14.7	14.7	99.8%	13.6	92.1%
12	Computer Software	1.9	1.9	99.1%	1.1	58.7%
13	Plant and Machinery	199.4	199.4	100.0%	184.8	92.7%
14	Tools & Equipments	18.1	18.1	100.0%	15.4	84.7%
15	Office Furniture & Fixtures	5.5	5.5	100.0%	4.7	86.3%
16	Other Vehicles	4.1	4.1	100.0%	4.1	99.7%

Sr. No.	Assets	Total Assets (₹ cr.)	Aero Assets including cargo (₹ cr.)	% Aero including cargo	Aero Assets excluding cargo (₹ cr.)	% Aero excluding cargo
17	Electrical Installations	636.8	633.6	99.5%	584.3	91.8%
18	Office Equipments	0.9	0.9	100.0%	0.9	99.5%
19	Furniture & Fixtures	18.8	18.3	97.8%	17.1	91.3%
20	X-Ray Baggage	36.4	36.4	100.0%	16.1	44.1%
21	CFT	23.5	23.5	100.0%	23.5	100.0%
22	Boundary wall (residential)	0.0	0.0	0.0%	0.0	-
23	Total	2,935.4	2,844.0	96.9%	2,634.2	89.7%

Proposal No. 3. Allocation of assets between Aeronautical and Non-aeronautical services

3.a.The Authority proposes the allocation of assets as on 1st April 2016 between aeronautical and non-aeronautical assets as detailed in Table 23.

7. Opening Regulatory Asset Base for Second control period

7.1. Opening RAB for 2nd control period under Hybrid Till as per AAI submission dated 06.03.2017 is ₹ 1,501.9 crores

Table 24 - Calculation of opening RAB as on 1st April 2016 as per AAI submission – Hybrid Till

S. No.	Particulars	Amount (₹ crore)
1	Original Cost of Airport Aeronautical Assets excluding ANS related assets as on 01.04.2011	702.9
2	Aeronautical asset addition during the 1 st control period	2,193.1
3	Cost of Aeronautical Assets [(1)+(2)] as on 01.04.2016	2,896.0
4	Accumulated Depreciation as on 01.04.2016	1,394.1
5	Opening RAB[(3)-(4)] as on 01.04.2016	1,501.9

7.2. The Authority proposes to adopt depreciation rates as detailed earlier in para 4.9 for calculating RAB for 2nd control period.

7.3. The Authority proposes the allocation of assets between aeronautical and non-aeronautical assets as detailed in Table 23.

7.4. Based on revised depreciation rates and revised asset allocation, the opening RAB for 2nd control period considered by the Authority under Hybrid Till is ₹ 1,991.6 crores.

Table 25 - Calculation of opening RAB as on 1st April 2016 as per the Authority – Hybrid Till

S. No.	Particulars	Amount (₹ crore)
1	Original Cost of Airport Aeronautical Assets excluding ANS related assets as on 01.04.2011	753.1
2	Aeronautical asset addition during the 1 st control period	2090.9
3	Cost of Aeronautical Assets [(1)+(2)] as on 01.04.2016	2844.0
4	Accumulated Depreciation as on 01.04.2016	852.3
5	Opening RAB[(3)-(4)] as on 01.04.2016	1991.6

Proposal No. 4. Opening Regulatory Asset Base for the 2nd control period

4.a. The Authority proposes to consider the opening regulatory base for the 2nd control period under Hybrid Till as ₹ 1,991.6 crores.

8. Capital Expenditure for Second control period

8.1. AAI has in their submissions dated 06.03.2017 submitted aeronautical capital expenditure of ₹ 2796.5 crores for the 2nd control period which was revised to ₹ 1679.8 crores during submissions dated 09.05.2017, 29.06.2017, 12.10.2017, 08.11.2017, 08.12.2017 and 11.01.2018 as shown below:

Table 26 – Aeronautical assets to be capitalized at CIA for 2nd control period as per AAI

S.N.	Particulars (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
1	Runways, Taxiways and Aprons	11.8	64.0	37.3	0.0	0.0
2	Terminal/Other Buildings	12.0	32.7	7.0	0.0	1267.1
3	Temporary Buildings	0.2	0.0	0.0	0.0	0.0
4	Roads, Bridges & culvert	5.2	10.3	0.0	0.0	0.0
5	Boundary wall (operational)	0.5	1.6	2.5	0.0	0.0
6	Boundary wall (residential)	0.4	0.0	0.0	0.0	0.0
7	Plant & Machinery	0.5	0.4	0.0	0.0	0.0
8	Tools and Equipments	0.0	0.0	0.0	0.0	0.0
9	Electrical Installations	10.9	51.4	10.0	0.0	1267.1
10	Furniture & Fixtures	0.0	0.5	0.0	0.0	0.0
11	Computer, IT Hardware & Access.	0.0	2.0	0.1	0.0	0.0
12	Computer Software	0.0	1.0	0.0	0.0	0.0
	Total (₹ 2796.5 crores)	41.6	163.8	56.9	0.0	2,534.2
Revised capital expenditure submitted by AAI dated 09.05.2017, 29.06.2017, 12.10.2017, 08.11.2017, 08.12.2017 and 11.01.2018						
1	Runways, Taxiways and Aprons	12.7	24.0	0.3	134.6	0.0
2	Terminal/Other Buildings	12.8	29.4	7.0	0.0	633.1
3	Temporary Buildings	0.0	0.0	0.0	0.0	0.0
4	Roads, Bridges & culvert	2.0	10.3	0.0	85.6	0.0
5	Boundary wall (operational)	0.0	1.6	2.5	0.0	0.0
6	Boundary wall (residential)	0.0	0.0	0.0	0.0	0.0
7	Plant & Machinery	0.0	0.0	0.0	0.0	0.0
8	Tools and Equipments	21.9	0.0	0.0	0.0	0.0
9	Electrical Installations	2.0	51.4	10.0	0.0	633.1
10	Furniture & Fixtures	0.3	0.5	0.0	0.0	0.0
11	Computer, IT Hardware & Access.	0.1	2.0	0.1	0.0	0.0
12	Computer Software	0.3	1.0	0.0	0.0	0.0
13	Other Vehicles	0.9	0.0	0.0	0.0	0.0
14	Office Equipments	0.1	0.0	0.0	0.0	0.0
15	CFT	0.3	0.0	0.0	0.0	0.0
	Total (₹ 1679.8 crores)	53.4	120.2	19.9	220.2	1266.1

8.2. AAI has submitted following details of the proposed capital works to be undertaken

during the control period:

8.2.1. Straightening / strengthening of 'B' Taxi from "C" Taxi to Runway 30 (₹ 33.1 crores under Runways, Taxiways & Apron in FY 2019-20)

In the portion of existing Apron, in front of Old terminal building adjacent to Cargo Terminal, the Centre line of Parallel Taxi track to be shifted to make it 182.5m by marking edge line of 23m wide realigned B-taxiway. The existing apron in front of Old terminal building adjacent to Cargo Terminal was initially designed for code-E type of aircraft operation, however the same may be strengthened for code-E type of aircraft, if required after ascertaining the strength.

Additional construction of 23m wide Parallel Taxi track with 10.5m wide shoulders on either side suitable for Code-E type of aircraft in between the existing Apron end and Secondary Runway 12/30.

Affected portion of 7.5m wide Runway 12/30 shoulder has to be strengthened or reconstructed a per site condition to facilitate construction of B-taxi track connected to Runway 12/30 suitable for Code-E type of aircrafts (B-747-400, B-777-300ER).

8.2.2. Construction 'N' taxi track (balance portion) connecting Runway 07-25 (₹ 9.9 crores under Runways, Taxiways & Apron in FY 2018-19)

Construction of 462m x 25m wide part link taxi track-N between Runway 07/25 and parallel taxi track-R and beyond, with fillets and 9.5m wide shoulder on both the sides (Refer attached drawing).

8.2.3. Construction 'R' taxi track left out portion connecting Runway 12-30 (₹ 25.2 crores under Runways, Taxiways & Apron in FY 2018-19)

Construction of 25m wide part parallel taxi track-R (886m west of taxi-track L1 and 704m between Q-Taxi-track and Runway 12/30) with fillets and 9.5m wide shoulder on both the sides to make a total pavement of 44m suitable for code 'E' aircraft operations.

8.2.4. Connectivity to metro rail to city side and provision of walkators at CIA (₹ 85.6 crores under Roads, bridges and culverts in FY 2019-20)

Chennai Metro Rail work is being commissioned at Chennai Airport. Presently the passengers are coming out of Domestic Terminal and proceeding to International Terminal which is around 700 metres away/ vice versa. With this connectivity the passengers will be able to use the walkalator and this will be connected to Chennai Metro Rail also. The Board approved the proposal of connectivity to Metro Rail to city side and provision of walkalators at Chennai Airport, Chennai at an estimated cost of ₹ 85.6 crores.

8.2.5. RET-I at a distance of 1831 m from the threshold of Runway 07 and RET25_1 at a distance of 1908m from the threshold of Runway 25 (₹ 64.5 crores under Runways, Taxiways & Apron in FY 2019-20)

Chennai Airport having land area of approx. 1301 acres has two Runways. Runway 07-25, 3658m x 45m suitable for Code E type of aircraft and Runway 12-30, 2680m x 45m is suitable for Code C type of aircraft.

The new International Terminal building (T4) having an area of 60528 sq. m is capable to handle 2300 passengers (4mppa), new Domestic Terminal building (T1) having an area of 72614 sq. m. is capable to handle 3300 passengers (10mppa). The old International Terminal building having an area of 42300 sq. m. and old Domestic Terminal building having an area of 19250 sq. m. are proposed to be reconstructed to enhance the total passenger handling capacity from 23 mppa to 30 mppa and beyond.

Chennai airport has a total of 86 nos. aircraft parking bays. Apron in front of Terminal building has 18 nos. in-contact stands and 15 remote bays suitable for B-747/ A-320, A-300, A-321 type of aircrafts. In addition to the above Chennai airport has 43 nos. remote parking bays in between the two cross runways suitable for parking B-747, A-321 and 5 nos. parking bays in front of old terminal building near cargo complex.

There are 5 link taxi tracks connecting Main Runway 07/25 and 'B' parallel Taxiway towards passenger terminal buildings.

Presently, total aircraft movements per week are 2464 at Chennai Airport and the existing Runway capacity is 32 aircrafts movements per hour for Runway

07-25 as declared vide ATM circular no. AAI/ATM/OPS/20-06/2017 dated 09.02.2017.

In order to match terminal building capacity, AAI had undertaken airside capacity enhancement study at Chennai Airport. The scope of work for straightening of the Taxi-track was issued vide letter dated 28.10.2016 which mentioned full length straightening of B Taxi-track for code-E operations. The provision of parallel taxi-track at 182.5m does not provide holding point for Code-E aircraft and smooth operation on parallel taxi-track. Since the existing 8-taxi-track in front of terminal buildings is at a distance of 206m which allows the holding point which is being practised at Chennai airport, the amendments were sought in the approved SOW.

To enhance the runway capacity of main RWY 07/25, Directorate of ATM proposed the following based upon TAAM study:

- 1) RET - 1 at a distance of 1831Mts. from the threshold of R/w 07
- 2) RET - 3 at a distance of 2390Mts. from the threshold of R/w 07
- 3) RET25_1 at a distance of 1908Mts. from the threshold of R/w 25

Construction of 23m wide Rapid Exit Taxiway (RET-1) with fillets and 10.5m wide shoulder on both the sides at a distance of 1831m from the Runway threshold 07 suitable for Group C type of aircraft (8-747-SP/ 8-767/A-300/A-320/A-330)

Construction of 23m wide Rapid Exit Taxiway (RET-3) with fillets and 10.5m wide shoulder on both the sides at a distance of 2390m from the Runway threshold 07 suitable for Group D type of aircraft (8-747-4001B-777-300 ER/A-340/MD-11/DC- 10/IL-96)

Construction of 23m wide Rapid Exit Taxiway (RET-25_1) with fillets and 10.5m wide shoulder on both the sides at a distance of 1908m from the Runway threshold 25 suitable for Group C type of aircraft (B-747-SP/ B-767/A-300/A-320/A-330).

8.2.6. Construction of terminal building - Phase II (Phase 1 - ₹ 1,315 crores under Terminal/ Other Building and Electrical Installations in FY 2020-21)

Chennai Airport which is third biggest airport in the country is managed by Airports Authority of India. The land in possession by AAI is around 1326 acres. AAI took up modernization of Chennai Airport during the year 2008 at the cost of ₹ 2,015 crores and completed the phase-I modernization during the year 2012. The master plan for the modernization of Chennai Airport is developed to cater for passenger capacity of 23 million. The present traffic handled by Chennai Airport is 14.30 million during the year 2014-15. Considering present growth of traffic the Terminal Building and airside capacity is likely to saturate by 2024. The phase-1 developmental activities involved were construction of New Domestic Terminal with a capacity of 10 million, extension of International Terminal with a capacity of 4 million. The balance 6 million and 3 million of domestic and international passengers were slated to be handled by refurbishing of the Old Terminals. The Phase-I development also included extension of secondary runway by 1030 mtrs., construction of bridge across Adyar river, parallel taxi track, augmentation of aprons etc. including all related electro-mechanical units, IT solutions and other airport systems solutions. Considering the rapid growth and to upgrade the facilities further to international standards, AAI decided to go ahead with Phase-II modernization programme. The Phase-II modernization shall include demolition and reconstruction of old domestic terminal, old international terminal, reconstruction of airside corridor for seamless integration, satellite terminal building, augmentation of contact bays, development of multi-level car park, development of integrated common user cargo complex, development of contact bays for category E cargo freighters, etc. AAI has obtained in-principle approval from Competent Authority.

Construction of centrally air-conditioned Domestic Terminal Building (with area of 60300 sq. m.) and International Terminal Building (with area of 108500 sq. m.) with all modern facilities and amenities, shall be designed for atleast 3000 pax (10 mppa) Domestic and 4000 pax (6 mppa) International passengers at a time with the recommended area specifications and to

match the level of service "B" as per IATA recommendations in initial years & finally to match level of service "C" in year of saturation. The building should be provided with aesthetically appealing and soothing interior decoration matching the modern structure. Space planning should ensure that no dead space/ area is created in the Departure area, Arrival area, Security Hold area and Concourse area are to be provided with adequate nos. of toilets for gents, ladies and differently-abled persons along with drinking water facility. Suitable number of ramps to be provided for entry and exit of differently - abled persons in Departure and Arrival area. Provision of battery operated buggies for senior citizens/ differently-abled persons as per requirement. Additional fixtures in the toilet to be provided for arrival passengers.

Authority's Examination

- 8.3. The Authority requested AAI to submit the aeronautical capital expenditure incurred in FY 2016-17 and in 2nd control period based on actual capital expenditure in FY 2016-17. In response to this, AAI vide submission dated 26.08.2017 provided the revised aeronautical capital expenditure to be incurred in 2nd control period. AAI further submitted the revised capital expenditure on 08.11.2017, 08.12.2017 and 11.01.2018. The Authority has accordingly updated the capital expenditure for the 2nd control period.
- 8.4. The Authority noted that AAI has included capital expenditure towards solar power plant (as part of Tools & Equipments ₹ 8.5 crore in FY 2016-17) as 100% aeronautical capital expenditure in the 2nd control period. The Authority proposes to consider the allocation of solar power plant capital expenditure based on 92.5% ratio as aeronautical capital expenditure (as part of Tools & Equipments ₹ 7.9 crore in FY 2016-17).
- 8.5. The Authority proposes to consider aeronautical capital expenditure towards ceremonial lounge (₹ 10.0 crores in FY 2017-18), construction of CISF barracks (₹ 4.0 cr. in FY 2017-18) and other capital expenditure in terminal/ other building (₹ 15.4 crores in FY 2017-18) under terminal/ other building as submitted by AAI dated 26.08.2017, 08.11.2017 and 08.12.2017.
- 8.6. The Authority proposes to consider aeronautical capital expenditure towards re-

construction of Taxiway "H" (Phase-I) (₹ 7.0 crores in FY 2017-18), re-construction of T/w "H" (Phase-II) (₹ 5.0 crores in FY 2017-18), re-Construction of dom.& intl bays (₹ 5.0 crores in FY 2017-18), construction of fillet at Taxiway 'F' (₹ 4.0 crores in FY 2017-18), Re-const.'D' Taxitrack under Runway (₹ 3.0 crores in FY 2017-18) under Taxiways and Aprons as submitted by AAI dated 26.08.2017, 08.11.2017 and 08.12.2017.

8.7. The Authority proposes to consider aeronautical capital expenditure towards Connectivity to Metro Rail to city side and provision of walkators at CIA (₹ 85.6 cr. in FY 2019-20) as submitted by AAI dated 26.08.2017, 08.11.2017 and 08.12.2017.

8.8. The Authority proposes to allocate the capital expenditure for providing structural arrangements at roof truss level for supporting the cradle system for façade cleaning at NDTC (T-1) (₹ 5.0 cr. in FY 2020-21) based on 92.5% ratio as aeronautical capital expenditure (₹ 4.6 crore in FY 2020-21 - 50% as part of Terminal/ Other Building and remaining as part of Electrical Installations).

8.9. The Authority proposes to consider aeronautical capital expenditure towards straightening and strengthening of 'B' Taxi from 'C' Taxi to Rwy 30 (₹ 33.1 cr. in FY 2019-20) and cost of balance works for construction of 'N' taxitrack (₹ 4.5 cr. in FY 2019-20) as submitted by AAI dated 26.08.2017, 08.11.2017 and 08.12.2017.

8.10. The Authority noted that the total capital expenditure for Construction 'N' Taxitrack (balance portion) connecting Runway 07-25 is ₹ 9.9 crores in FY 2019-20 with total area of 16,500 sq. m. and per sq. m. cost is ₹ 6,000 which is more than normative benchmark of ₹ 4,700 for Runway/taxiway and aprons (excluding earthwork up to subgrade level).

8.11. The Authority noted that the total Construction 'R' taxitrack left out portion connecting Runway 12-30 is ₹ 25.2 crores in FY 2019-20 with total area of 42,000 sq. m. and per sq. m. cost is ₹ 5,998 which is more than normative benchmark of ₹ 4,700 for Runway/taxiway and aprons (excluding earthwork up to subgrade level).

8.12. The Authority noted that the total capital expenditure for RET-I and RET25_1 is ₹ 64.5 crores in FY 2019-20 with total area of 23,500 sq. m. and per sq. m. cost is ₹ 27,447 which is more than normative benchmark of ₹ 4,700 for Runway/taxiway and aprons (excluding earthwork up to subgrade level).

- 8.13. The Authority requested justification from AAI for higher than normative benchmark costs for construction 'N' taxitrack (balance portion) connecting Runway 07-25, construction 'R' taxitrack left out portion connecting Runway 12-30 and RET-I and RET25_1. AAI, as per the clarification provided dated 08.12.2017, submitted that the reason for higher than normative cost is due to i) labour rates at Chennai (City classification 'A') are 16.42% higher than labour rates at Cochin (City classification B) as per Notification dated 20.04.2017 for example minimum wages of unskilled labour at Chennai is ₹ 536/- per day whereas at Cochin it is ₹ 448/- per day; overall cost impact will be around 5%, ii) raw materials for pavement works like sand, aggregates are costlier in Chennai metro city in comparison to Cochin and iii) the proposed pavement work is to be constructed in operational area of Chennai Airport leads to extra overheads.
- 8.14. The Authority noted that the total capital expenditure for construction of terminal building - Phase II is ₹ 2467 crores. As per the clarification submitted by AAI dated 12.10.2017 and 11.01.2018, the construction of terminal building would be capitalized in two phases – first phase of ₹ 1,315 cr. to be capitalized in May, 2020 and the second phase of ₹ 1,152 cr. to be capitalized in the next control period. The Authority proposes to consider only first phase of INR 1,315 cr. to be capitalized in FY 2020-21.
- 8.15. The Authority noted that the total area of first phase of terminal building is 105,000 sq. m. and per sq. m. cost is ₹ 125,238 which is more than normative benchmark of ₹ 65,000 for terminal building.
- 8.16. The Authority requested justification from AAI for higher than normative benchmark costs for construction of terminal building. AAI, as per the clarification dated 08.12.2017, submitted that the reason for higher than normative cost is due to i) International standard IT and Airport System equipment/ installations/ software for faster check-in, better passenger flow, reduced queue lengths, real-time operational management, innovation i.e. self-bag drop, biometric processing, passenger flow management, dynamic signage, security screening, indoor positioning, beacons, interactive kiosks, electronic gates, greater mobile speeds/5G, airport app, ACDM, more cabling, greater reliance on Wi-Fi, larger communications rooms, more complex system

integration etc., ii) High end specification material of international standard are proposed to be used like laminated glass, structural steel, stainless steel railing, decorative false ceiling, insulated roofing etc. iii) Hold Baggage Screening (HBS), with co-ordinated based standard 3 CT machines sourced from seven twin-row check-in islands through a standard 4-level HBS in baggage hall, iv) To achieve GRIHA 4 star rating, GRIHA v2015 reference guide shall be followed for which international standards GRIHA/ LEED rated sanitary/ plumbing appliances, electric appliances, building material for core work and finishing work are proposed which includes high end international standard sanitary fittings, v) The cost of the building also increased due to geographical location of Airport i.e. seismic and coastal design criteria. Excavation for foundation and basement of a height of 9m in a rocky strata needs specialised waterproofing treatment and excavation methodology, and vi) Cost enhancement @ 6.5% p.a. has been considered in cost estimate prepared in April 2017 as per CPWD procedure which was not considered in normative cost determined in year 2014.

8.17. The Authority proposes to revise the total capital expenditure for construction of terminal building, construction 'N' taxitrack (balance portion) connecting Runway 07-25, construction 'R' taxitrack left out portion connecting Runway 12-30, RET-I and RET25_1 based on normative benchmarks for FY 2015-16 and increase the benchmarks by WPI of 4.2% per annum till the year of capitalization as shown in Table 27. The Authority also proposes to undertake a study by technical experts to estimate the allowable capital expenditure for construction of terminal building, construction 'N' taxitrack (balance portion) connecting Runway 07-25, construction 'R' taxitrack left out portion connecting Runway 12-30, RET-I and RET25_1 vis-à-vis normative benchmarks. The Authority had asked AAI for detailed information on justification for exceeding the normative benchmarks. Due to lack of detailed information and in the interest of avoiding delays in fixing tariffs, the Authority proposes to determine capital expenditure using normative norms at this stage. The Authority is aware of the shortcomings of this approach and therefore, shall undertake a study on reasonableness of capital expenditure after capitalization of these assets and make appropriate adjustments while determining tariffs for third control period. Based on

the outcome of study and the fairness of the tender procedures followed for selection of contractor, the Authority proposes to update capital expenditure at the time of tariff determination for 3rd control period.

Table 27 – Capital expenditure for taxi track as proposed by the Authority

Sr. No.	Asset	Year	Area (sq. m.)	Inflation adjusted normative benchmark cost per unit area (₹ per sq. m.)	Allowed Capex (₹ cr.)
1	'R' Taxitrack left out portion connecting Rwy 12-30	2020	42,000	5,541	23.3
2	N' Taxitrack (balance portion) connecting Rwy 07-25	2020	16,500	5,541	9.1
3	Rapid Exit Taxiway (RET)-I and RET25_1	2020	23,500	5,541	13.0
4	Construction of first phase of terminal building	2021	105,000	79,846	838.4

8.18. The Authority proposes to consider civil works of terminal building related capital expenditure (₹ 419.2 crore in FY 2020-21) in 2nd control period based on 92.5% ratio for aeronautical capital expenditure (revised to ₹ 387.8 crore in FY 2020-21).

8.19. The Authority proposes to consider Electrical installation capital expenditure related to terminal building (₹ 419.2 crore in FY 2020-21) in 2nd control period based on 92.5% ratio for aeronautical capital expenditure (₹ 387.8 crore in FY 2020-21).

8.20. As per para 6.11, the Authority decides to include cargo assets additions (₹ 2.6 cr. in FY 2016-17 as per AAI clarification dated 08.12.2017) from 01.04.2016 till 31.03.2017 and decides to exclude them from 01.04.2017 till 31.03.2021 while determination of tariff in the second control period. Further, the Authority notes that there is no clarity on the transfer of cargo assets to AAICLAS as of now. The Authority will take a view on this while truing up in the 3rd control period based on the decisions taken by the AAI.

8.21. The Authority proposes to consider the total aeronautical capital expenditure to be capitalized and added to RAB at ₹ 1,143.8 crores.

Table 28 - Revised aeronautical capital expenditure for 2nd control period as considered by the Authority

S.N.	Particulars (₹ crore)	2016-17*	2017-18	2018-19	2019-20	2020-21
1	Runways, Taxiways and Aprons	12.7	24.0	0.3	83.0	0.0
2	Terminal/Other Buildings	12.8	29.4	7.0	0.0	390.1
3	Temporary Buildings	0	0	0	0	0
4	Roads, Bridges & culvert	2.0	10.3	0.0	85.6	0.0
5	Boundary wall (operational)	0.0	1.6	2.5	0.0	0.0
6	Boundary wall (residential)	0.0	0.0	0.0	0.0	0.0
7	Plant & Machinery	0.0	0.0	0.0	0.0	0.0
8	Tools and Equipments	23.3	0.0	0.0	0.0	0.0
9	Electrical Installations	2.0	51.4	10.0	0.0	390.1
10	Furniture & Fixtures	0.5	0.5	0.0	0.0	0.0
11	Computer, IT Hardware & Access.	0.3	2.0	0.1	0.0	0.0
12	Computer Software	0.3	1.0	0.0	0.0	0.0
13	Other Vehicles	0.9	0.0	0.0	0.0	0.0
14	Office Equipments	0.1	0.0	0.0	0.0	0.0
15	CFT	0.3	0.0	0.0	0.0	0.0
	Total (₹ 1,143.8 crores)	55.2	120.1	19.9	168.6	780.1

* FY 2016-17 includes cargo capital additions

8.22. The Authority notes that the cost of the planned works is indicative. The Authority proposes to consider the addition to aeronautical assets during the 2nd control period as given in Table 28 subject to true-up of RAB based on actual aeronautical asset addition, outcome of the study mentioned in para 8.17 and the actual costs as per the tender while determining tariffs for the 3rd control period.

8.23. In the 2nd control period, project works related to connectivity to metro rail to city side and provision of walkators at CIA, RET-I and RET25_1 and construction of terminal building - Phase II are proposed to be taken up. These require user consultation as per the Guidelines. The Authority expects AAI to provide all the required project information as part of the consultation process with users.

Proposal No. 5. Capital Expenditure

- 5.a. The Authority proposes to consider allowable project cost of ₹ 1,143.8 crores which includes the first Phase of construction of Terminal Building and accordingly to reckon the amount of ₹ 1,143.8 crores as addition for total assets during the 2nd control period.
- 5.b. AAI should undertake user stakeholder consultation process for major capital expenditure items as per the Guidelines.
- 5.c. The Authority proposes to true-up the Opening RAB of the next control period depending on the capital expenditure incurred and date of capitalisation of underlying assets in a given year.

9. Depreciation

9.1. AAI has submitted that the depreciation rates used are as per AAI's approved accounting policy. The salient aspects of AAI's depreciation policy being followed are as under:

9.1.1. Method of depreciation: straight line;

9.1.2. 100% of depreciation rates of assets if assets are used in a financial year for 180 days or more. If the assets are used for less than 180 days in a year the depreciation is charged at 50% of the depreciation rates. This policy is effective from the financial year 2012-13;

9.1.3. Residual value for each asset is taken as Re.1 balance to be provided by way of depreciation as per prescribed rates.

Authority's Examination

9.2. The Authority notes that the depreciation policy of AAI is not in accordance with the depreciation rates adopted by the Authority in other private airports. AAI is a statutory body established under the AAI Act and it does not come under the Companies Act. The Board of AAI has approved the depreciation policy that has been adopted by AAI.

9.3. The Authority notes that on some of the assets the depreciation charged by AAI is not in line with the Companies Act 2013. The Authority is of the view that adoption of depreciation rates as prescribed under the Companies Act at any point of time is appropriate, considering the variation in policies adopted by the airport operators. The Authority further notes that there is no specific mention of the classes of assets viz. apron, taxiway and runway in the Companies Act 2013 or 1956 or in the Income Tax Act 1961.

9.4. The Authority has recently released order on applicable depreciation rates. The revised depreciation rates are applicable from 01.04.2018. The Authority has noted the revised depreciation rates may not make a significant difference in calculation of depreciation as compared to the rates used in this consultation paper. The Authority shall make necessary adjustments in the rates while issuing the order for the airport.

9.5. In light of above, for the categories of assets (runway, taxiway and apron) where no specific depreciation rate/ useful life has been mentioned in the Companies Act, the

Authority proposes to adopt depreciation rate of 3.33%. This rate is proposed to be applied on runway, taxiway and apron assets existing as on 01.04.2011 and on these assets added during 1st and 2nd control period.

9.6. The Authority proposes to adopt the depreciation rates mentioned under Companies Act for assets as per the Companies Act 1956 till FY 2013-14 and as per the Companies Act 2013 from FY 2014-15 onwards as the effective date of implementation of the Companies Act 2013 is 01.04.2014.

9.7. The Authority proposes that for the new assets to be capitalized in the 2nd control period, depreciation is charged at 50% of the depreciation rates in the year of capitalization.

9.8. The depreciation rates as submitted by AAI and as considered by the Authority during the 1st and 2nd control period are given below:

Table 29 - Depreciation rates as submitted by AAI and as considered by the Authority

No.	Asset Class	As per AAI	As per Authority till FY 2014	As per Authority FY2015 onwards
1	Land	0%	0.00%	0.00%
2	Runways, Taxiways, Aprons	13%	3.33%	3.33%
3	Roads, Bridges & culvert	13%	1.63%	3.33%
4	Terminal/Other Buildings	8%	1.63%	3.33%
5	Cargo Building	8%	1.63%	3.33%
6	Temporary Buildings	100%	100.00%	33.33%
7	Building - Residential	5%	1.63%	3.33%
8	Security Fencing	100%	100.00%	33.33%
9	Boundary wall (operational)	8%	1.63%	3.33%
10	Other Buildings - Unclassified	8%	1.63%	3.33%
11	Computer, IT Hardware & Access.	20%	16.21%	16.67%
12	Computer Software	20%	20.00%	20.00%
13	Plant and Machinery	11%	4.75%	6.67%
14	Tools & Equipments	20%	4.75%	6.67%
15	Office Furniture & Fixtures	20%	6.33%	10.00%
16	Other Vehicles	14%	9.50%	12.50%
17	Electrical Installations	11%	4.75%	10.00%
18	Office Equipments	18%	4.75%	20.00%
19	Furniture & Fixtures	20%	6.33%	10.00%
20	X-Ray Baggage	11%	4.75%	6.67%

No.	Asset Class	As per AAI	As per Authority till FY 2014	As per Authority FY2015 onwards
21	CFT	13%	4.75%	6.67%
22	Boundary wall (residential)	5%	1.63%	3.33%

9.9. The revised depreciation for the 2nd control period as per Hybrid Till as proposed by the Authority is given below:

Table 30 - Authority's consideration on depreciation for the 2nd control period – Hybrid Till

No.	Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21	Total
1	As per AAI	247.3	261.6	264.1	257.5	480.2	1,510.8
2	As per Authority	134.3	128.3	129.7	130.2	156.5	678.9

Proposal No. 6. Treatment of Depreciation

6.a. The Authority proposes to adopt depreciation rates as per Table 29 and depreciation for the 2nd control period as per Table 30.

6.b. The Authority shall make necessary adjustments in the depreciation rates based on the order issued on applicable depreciation rates while issuing the order for CIA.

10. RAB for Second control period

10.1. AAI has submitted Regulatory Asset Base for 2nd control period under Hybrid Till as follows:

Table 31 - Summary of the RAB and Depreciation for CIA (Airport Services) as per AAI for the 2nd control period

	Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
A	Opening Aeronautical RAB	1,501.9	1,296.2	1,198.4	991.2	733.6
B	Aeronautical Additional Assets capitalized during the year	41.6	163.8	56.9	0.0	2,534.2
C	Disposals/Transfers	0.0	0.0	0.0	0.0	0.0
D	Depreciation	247.3	261.6	264.1	257.5	480.2
F	Closing Aeronautical RAB (A+B-C-D)	1,296.2	1,198.4	991.2	733.6	2,787.6
	Average RAB (A+E)/2	1,399.1	1,247.3	1,094.8	862.4	1,760.6

Authority's Examination

10.2. The Authority proposes to adopt opening RAB for FY 2016-17 as detailed in Table 25.

10.3. The Authority proposes to adopt depreciation as proposed in Table 30.

10.4. The Authority proposes ₹ 1,143.8 crores as the addition of aeronautical assets to RAB as detailed in Table 28.

10.5. As part of the clarifications provided dated 26.08.2017 and 12.10.2017, AAI submitted that all cargo assets have not been considered in the 2nd control period. As per AAI clarifications, AAI cargo logistics and allied services company limited (AAICLAS) is managing cargo activities at CIA, which is 100% subsidiary of AAI. AAICLAS would file cargo MYTP of CIA separately. As per AAI's submission dated 12.10.2017, the Authority notes that the accounts for cargo operations are now booked (FY 2017-18) under AAICLAS for CIA. Hence, the Authority decides to include cargo assets from 01.04.2016 till 31.03.2017 and decides to exclude them from 01.04.2017 till 31.03.2021 while determination of tariff in the second control period. Further, the Authority notes that there is no clarity on the transfer of cargo assets to AAICLAS as of now. The Authority will take a view on this while truing up in the 3rd control period based on the decisions taken by the AAI.

10.6. The revised Regulatory Asset Base as calculated by the Authority for 2nd control

period under Hybrid Till is as follows:

Table 32 - Summary of forecast and Roll forward RAB and Depreciation for CIA (Airport Services) considered by the Authority for 2nd control period – Hybrid Till

	Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
A	Opening Aeronautical RAB	1,991.6	1,798.3	1,790.0	1,680.2	1,718.6
B	Aeronautical Assets capitalized during the year	55.2	120.1	19.9	168.6	780.1
C	Disposals/Transfers	0.0	0.0	0.0	0.0	0.0
D	Depreciation	134.3	128.3	129.7	130.2	156.5
E	Closing Aeronautical RAB (A+B-C-D)	1,912.6	1,790.0	1,680.2	1,718.6	2,342.2
	Average RAB (A+E)/2	1,952.1	1,794.2	1,735.1	1,699.4	2,030.4
F	Adjustment to Closing RAB of FY 2016-17 due to Cargo RAB	114.3				
	Adjusted Closing RAB for FY 2016-17 excluding Cargo RAB (E-F)	1,798.3				

10.7. The Authority proposes to true up the RAB of 2nd control period based on actual asset addition and revised depreciation rates, at the time of determination of tariff for the 3rd control period.

Proposal No. 7. RAB for 2nd control period

7.a. The Authority proposes to consider RAB for 2nd control period as given in Table 32.

7.b. The Authority proposes to true up the RAB of 2nd control period based on actual asset addition at the time of determination of tariff for the 3rd control period.

11. Cost of Equity, Cost of Debt, Gearing, and Fair Rate of Return (FRoR)

- 11.1. AAI has considered Fair Rate of Return (FRoR) as 14% at par with the decision taken by the Authority in Chennai, Kolkata Guwahati and Lucknow Airports for the 1st control period.
- 11.2. AAI has apportioned debt for CIA and financing activities are undertaken centrally at the corporate office of AAI.
- 11.3. As per clarifications provided by AAI dated 05.06.2017, total debt on books of AAI is 435 crores and total equity is 13,070 crores as on FY 2015-16. The cost of debt is 8.6% for unsecured non-convertible redeemable bonds to be redeemed in FY 2017-18.

Authority's Examination

- 11.4. The Authority has recognised that AAI's capital structure may not be regarded as an efficient one in that it doesn't optimize the cost of funds from a regulatory perspective. The Authority desires that the FRoR allowed to AAI should come down over a period of time by optimizing capital gearing. The Authority may also consider a normative capital structure to determine the FRoR at a later date. It may not be reasonable to expect AAI to contract large amounts of debt over a short period of time.
- 11.5. The Authority notes that as per a study conducted in respect of the 'Fair Rate of Return Estimation for AAI' in July 2011 it estimated a figure of 14.96% as Fair Rate of Return for AAI. The Authority notes that it has considered FRoR at 14% for CIA and Kolkata in the 1st control period considering the recommendations of another study done by NIPFP. Based on the decision taken for CIA and Kolkata, the Authority considered FRoR at 14% for Guwahati and Lucknow airport for 1st control period.
- 11.6. Based on the above, the Authority proposes to consider FRoR at the rate of 14% for CIA for the 1st and 2nd control period as submitted by AAI.

Proposal No. 8. FRoR

- 8.a. The Authority proposes to consider the FRoR at 14% for CIA for the 1st and 2nd control period.
- 8.b. The Authority will undertake a study to determine FRoR for major AAI airports given the low debt structure of AAI as a whole.

12. Revenue from services other than aeronautical services

12.1. AAI has forecasted revenue from services other than aeronautical services as below:

Table 33 - Revenue from Non-aeronautical Services – Projected by AAI for 2nd control period

No.	Revenue from services other than Regulated Services (₹ crore)	2015-16 (base)	2016-17	2017-18	2018-19	2019-20	2020-21
1	Terminal Concessions - Restaurants/ Snack Bars/ Flt Kitchen	24.3	27.7	31.5	35.9	41.0	49.2
2	Terminal Concessions - TR Stalls	23.3	26.6	30.3	34.5	39.4	47.3
3	Terminal Concessions - Duty Free Shops	40.5	55.5	61.0	67.1	73.8	88.6
4	Terminal Concessions - Hoarding and Display	23.1	25.4	28.0	30.8	33.9	40.6
5	Terminal Concessions - Car Rentals	3.4	3.8	4.1	4.5	5.0	6.0
6	Terminal Concessions - Other Miscellaneous Items	2.8	2.9	3.0	3.2	3.3	3.5
7	Lease Rent	67.7	72.8	78.3	84.1	90.4	97.2
8	Space Rent	22.2	24.4	26.8	29.5	32.4	38.9
9	Hanger	5.8	6.3	7.0	7.7	8.4	10.1
10	Car Parking	20.6	22.6	24.9	27.4	30.1	36.2
11	Other Income	14.0	14.7	15.4	16.2	17.0	17.8
12	Public Admission Fees	0.9	1.0	1.1	1.2	1.4	1.6
13	Revenues from Interest Income	1.5	1.6	1.7	1.8	1.9	2.0
	Total	250.0	285.2	313.2	344.0	378.0	439.0

12.2. The growth rates assumed by AAI for forecasting non aeronautical revenues are given below:

Table 34 – Assumption (growth rates) for Service other than Regulated Services for the 2nd Control Period as per AAI

No.	Particular	2016-17	2017-18	2018-19	2019-20	2020-21
1	Terminal Concessions - Restaurants/ Snack Bars/ Flt Kitchen	14%	14%	14%	14%	20%
2	Terminal Concessions - TR Stalls	14%	14%	14%	14%	20%
3	Terminal Concessions - Duty Free Shops	37%	10%	10%	10%	20%
4	Terminal Concessions - Hoarding and Display	10%	10%	10%	10%	20%
5	Terminal Concessions - Car	10%	10%	10%	10%	20%

No.	Particular	2016-17	2017-18	2018-19	2019-20	2020-21
	Rentals					
6	Terminal Concessions - Other Miscellaneous Items	5%	5%	5%	5%	5%
7	Lease Rent	7.5%	7.5%	7.5%	7.5%	7.5%
8	Space Rent	10%	10%	10%	10%	20%
9	Hanger	10%	10%	10%	10%	20%
10	Car Parking	10%	10%	10%	10%	20%
11	Other Income	5%	5%	5%	5%	5%
12	Public Admission Fees	10%	10%	10%	10%	20%
13	Revenues from Interest Income	5%	5%	5%	5%	5%

Authority's Examination

12.3. The Authority noted that AAI has clarified in their 2nd control MYTP that due to new contract for duty free revenue in FY 2016-17, the revenues in FY 2016-17 have grown by 37% to ₹ 55.5 cr. The Authority proposes to consider ₹ 55.5 cr. as duty free revenues in FY 2016-17 as proposed by AAI since it is as per the contract.

12.4. The Authority noted that as part of clarifications provided dated 26.08.2017, AAI has revised the growth rates to 10% (from 14% as submitted earlier) for revenues from services other than regulated services all the revenues except for land lease revenues, duty free revenues in FY 2016-17, other miscellaneous revenues, other income and revenue from interest income as per contractual arrangements. The Authority proposes to consider the revised growth rates as submitted by AAI dated 26.08.2017 for the determination of tariff for the 2nd control period as these are as per contractual agreements.

12.5. The Authority proposes that non-aeronautical revenues will be trued up if it is higher than the projected revenues. In case there is a shortfall, true-up would be undertaken only if the Authority is satisfied that there are reasonably sufficient grounds for not realizing the projected revenues. The Authority proposes to accept the revenues from services other than regulated services as submitted by AAI except for adjustments as detailed below.

Adjustment of lease rentals

12.6. AAI has allotted following land to cargo, ground handling and fuel companies (CGF)

for their operations. AAI has considered income from such land lease as non-aeronautical revenues

Table 35 – Details of land allotted to cargo, ground handling and supply of fuel service providers in 2nd control period

Service	Service Provider	Land Allocated (Sq.m)		Land Lease revenues (FY 2015-16) ₹ crore
		Paved	Unpaved	
Fuel	IOCL		23,064	16.8
Fuel	HPCL		3,885	2.8
Fuel	BPCL		2,716	2.7
Fuel	RIL		6,000	4.4
Ground Handling	Bhadra	7,105		5.2
Cargo	Air India		17,549	12.8
Cargo	Bhadra	109		0.1

12.7. As per para 6.11, the Authority decides to include Cargo revenues from 01.04.2016 till 31.03.2017 and decides to exclude them from 01.04.2017 till 31.03.2021 while determination of tariff in the second control period. Further, the Authority notes that there is no clarity on the revenue received by AAI from AAICLAS's cargo operations at CIA. As there is no clarity on the revenue sharing mechanism between AAI and AAICLAS, the Authority has decided to not consider the potential revenue from cargo operations at this juncture. The Authority will take a view on this while truing up in the 3rd control period based on the decisions that may be taken by the AAI in the matter. The Authority may also make necessary assumptions regarding the revenue that should accrue to AAI in case the revenue share arrangement does not truly reflect arms-length transactions between AAI and its subsidiary.

12.8. The Authority noted that AAI as per clarification dated 08.12.2017 has proposed land lease revenues from GH agencies for FY 2016-17 as ₹ 4.9 cr. and proposes to accept the same. Further, the Authority noted that AAI in submission dated 26.08.2017 and 08.12.2017 has not increased land lease rentals from cargo, ground handling agencies and oil companies for the rest of the control period and proposes to accept the same.

12.9. As per the provisions of the AERA Act, services rendered in respect of cargo, ground handling and fuel supply are aeronautical services.

12.10. The Authority proposes to consider land lease revenues on account of the aeronautical services of CGF as aeronautical revenue.

12.11. The Authority noted that hangars charges have been considered as non-aeronautical revenues and hangar assets have been excluded from RAB.

12.12. The Authority observes that non-aeronautical revenue at CIA is low and expects AAI to utilize its resources better and maximize its non-aeronautical revenue to keep the aeronautical tariff down.

12.13. The Authority proposes to consider non-aeronautical revenues as given below:

Table 36 – Adjustment to Revenue from Non-aeronautical Services considered by Authority for 2nd control period

Revenue from services other than Regulated Services (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Non-Aeronautical Revenues as per AAI (A)	285.2	313.2	344.0	378.0	439.0
Adjustment:					
Change in revenue from cargo, ground handling and fuel services considered as aeronautical revenues and change in growth rates (B)	50.0	55.9	62.7	70.4	102.5
Non-Aeronautical Revenues as per Authority (A-B)	235.3	257.2	281.3	307.6	336.5

Proposal No. 9. Non Aeronautical Revenues

9.a. The Authority proposes to consider the revenues accruing to AAI on account of the aeronautical services of Cargo facility, Ground Handling Services and Supply of fuel to aircraft (FTC) including land lease rentals as aeronautical revenue.

9.b. The Authority proposes to consider the Non Aeronautical Revenue as per Table 36.

9.c. The Authority proposes that non-aeronautical revenues will be tried up if it is higher than the projected revenues. In case there is a shortfall, true-up would be undertaken only if the Authority is satisfied that there are reasonably sufficient grounds for not realizing the projected revenues.

13. Operation and Maintenance Expenditure

13.1. Operation and Maintenance (O&M) expenditure submitted by AAI is segregated into:

(i) Payroll expenses; (ii) Admin and General Expenditure; (iii) Repair and Maintenance Expenditure; (iv) Utilities and Outsourcing Expenditure; and (v) Other Outflows. The expenditure related to cargo operations has not been considered in 2nd control period while determining RAB.

13.2. Summary of aeronautical expenses proposed by AAI for 2nd control period is as below:

Table 37 - Summary of Aeronautical O&M expenditure as submitted by AAI for 2nd control period on Hybrid Till

No.	Particulars (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
1	Pay roll Expenditure of CIA	118.1	147.7	160.6	174.7	190.1
2	Expenditure for CIA employees' retirement benefits allocated at CHQ	19.5	24.4	25.7	26.9	28.3
A	Total Pay roll Expenditure (1+2)	137.7	172.1	186.3	201.7	218.4
4	Administrative and General Expenditure	3.9	4.3	4.7	5.2	5.7
5	Apportionment of administration & General expenditure of CHQ	24.3	25.6	26.8	28.2	29.6
B	Total Administration & General Expenditure(4+5)	28.2	29.8	31.5	33.4	35.3
C	Repairs and Maintenance Expenditure (Total)	71.0	78.1	85.9	94.5	103.9
6	Power Charges	69.1	69.1	69.1	69.1	69.1
7	Water Charges	1.7	1.7	1.7	1.7	1.7
8	Outsourcing Charges	13.4	14.8	16.2	17.9	19.6
D	Utility and Outsourcing Expenditure (6+7+8)	84.2	85.6	87.0	88.7	90.5
E	Other Outflows	11.7	12.2	12.8	13.5	14.2
F	Financing Charges	21.7	4.7	0.0	0.0	0.0
	Total (A+B+C+D+E+F)	354.5	382.5	403.5	431.6	462.2

13.3. The details of the assumptions made by AAI for O&M Expenditure are given below:

Table 38 – Assumptions made by AAI for each item of O&M expenditure

No.	Particular	2016-17	2017-18	2018-19	2019-20	2020-21
1	Payroll Expenses*					
	Salaries and Wages	9%	25%	9%	9%	9%
	PF contribution	9%	25%	9%	9%	9%
	Medical expenses	9%	25%	9%	9%	9%
	Overtime	5%	25%	5%	5%	5%
	Staff Welfare Fund	9%	25%	9%	9%	9%
	Allocation of Retirement Benefit provided at CHQ in r/o CIA Employees	5%	25%	5%	5%	5%
2	R&M Expenses	10%	10%	10%	10%	10%
3	Utility and outsourcing Expenditure					
	Power and water charges	0%	0%	0%	0%	0%
	Other outsourcing costs	10%	10%	10%	10%	10%
4	Administration and General Expenditure					
	Admin & General Expenses	10%	10%	10%	10%	10%
	Apportionment of CHQ/RHQ Expenses	5%	5%	5%	5%	5%
5	Other Outflows					
	Municipal Taxes	-46%	0%	0%	0%	0%
	Collection Charges on PSF & UDF	6%	6%	6%	6%	6%
	Other Misc. Office Expenses	10%	10%	10%	10%	10%
6	Financing Charges					
	Financing Charges	-56%	-78%	-100%	-	-

* Higher growth rate for increase in Payroll costs in FY 2017-18 is due to 7th Pay Commission revision

13.4. AAI has segregated total O&M expenditure for the 2nd control period into aeronautical expenses, non-aeronautical expenses, and common expenses. Common expenses in turn have been allocated between aeronautical and non-aeronautical services.

13.5. Expense allocation as submitted by AAI for 2nd control period is tabulated below:

Table 39 – O&M Expense allocation as submitted by AAI

Sr. No.	Particulars	Aero Expense	Non-Aero Expense
1	Payroll Expenses - Non-CHQ	87%	13%
2	Payroll Retirement benefit expenses Apportionment – CHQ	89%	11%
3	Admin and General Expenses – Non CHQ	85%	15%

Sr. No.	Particulars	Aero Expense	Non-Aero Expense
4	Admin and General overheads Expenses Apportionment – CHQ/RHQ	85%	15%
5	R&M Expenses	90%	10%
6	Utility and Outsourcing Charges	88%	12%
7	Other Outflows	94%	6%
	Total	89%	11%

Authority's Examination

13.6. The Authority considered the operating expenses and their projections submitted by AAI and noted the following.

Forecasting of payroll expenses

13.6.1. The Authority notes that expenditure on apportionment of retirement benefits provided to CHQ in respect of CIA employees is increased at 5% annually for 2nd control period which is different from the 7% for the above mentioned payroll components. The Authority proposes to apply the same growth rate of 7% annually except for FY 2017-18 for expenditure on apportionment of retirement benefits provided to CHQ in respect of CIA employees (as per discussion with AAI).

13.6.2. AAI has submitted that Ministry of Civil Aviation has approved pay revision for executives and non-executives w.e.f. 01.01.2017 and the impact of pay revision is 37.16% for a typical middle level executive. Accordingly, AAI requested the Authority to consider pay revision impact of 37.16% increase in Payroll expense while finalizing tariffs of CIA. In view of the above, an increase of 37.16% is proposed for projection of the pay roll expenditure for FY 2017-18.

13.6.3. The Authority notes that payroll cost components – Salaries and Wages, medical benefits and PF contribution have been increased by AAI at the growth rate of 9% annually for 2nd control period except for FY 2017-18. These growth rates appear to be on a higher side. The Authority proposes a growth rate of 7% for FY 2016-17 in the above payroll components and growth rate of 5% (in line with average inflation rate) for FY 2018-19, FY 2019-20 and FY 2020-21.

13.6.4. AAI has submitted apportionment of CHQ/RHQ expenses on cost basis. The

Authority proposes to adopt CHQ/RHQ overheads apportionment for the 2nd control period based on actual revenue basis data provided by AAI. The Authority proposes to increase CHQ/RHQ overheads apportionment costs (admin & general expenditure of CHQ/RHQ) by 5% per annum for the 2nd control period as submitted by AAI.

Segregation of aeronautical expenses

- 13.7. The Authority proposes to adopt ratio of 95% as aeronautical costs to allocate payroll expenses after excluding cargo employees' costs.
- 13.8. The Authority noted that apportionment of retirement benefits provided in CHQ in respect of CIA and apportionment of admin CHQ expenses have been considered as 100% aeronautical expenses. The Authority proposes to use the ratio of 90% to 10% for aeronautical and non-aeronautical allocation for apportionment of admin CHQ/RHQ expenses after excluding cargo employees' costs on revenue basis. The Authority proposes to use the ratio of 95% to 5% for aeronautical and non-aeronautical allocation for retirement benefits provided at CHQ in respect of employees at CIA after excluding cargo employees' costs based on ratio of cargo employees to total airport employees.
- 13.9. The Authority noted that the expenses related to vehicles such as R&M – Vehicles, vehicle insurance, vehicle hire charges etc. have been allocated based on the vehicle ratio.
- 13.10. Terminal Area ratio for calculation of aeronautical assets is proposed as 92.5%. This ratio has been applied to specific expenses in R&M – Civil, R&M – Electrical, R&M Furniture & Fittings, R&M Electronics, municipal taxes, advertisement and conservancy charges.
- 13.11. Quarter ratio for residential building as per Clause 6.2.4 has been applied to specific expenses related to residential buildings in R&M – Civil, R&M – Electrical, maintenance and cleaning (watch and ward expenses) and other miscellaneous expenses to determine aeronautical assets.
- 13.12. Operational building ratio of 94.9% (aeronautical) to 5.1% (non-aeronautical) has been used to allocate assets related to operational building. This ratio has been applied to specific expenses related to operational building in R&M – Electrical.

13.13. The Authority noted that common expenses for ANS employees have not been deducted from the expenses of 1st and 2nd control period. As per the clarifications provided by AAI dated 26.08.2017, AAI submitted that ANS staff cost is not there in Chennai Airport hence common expenses for the same are not deducted.

13.14. The Authority also noted that cargo expenses have not been included as part of MYTP calculations and requested clarifications from AAI for the same. As per the clarifications provided by AAI dated 26.08.2017 and 12.10.2017, AAI submitted that cargo assets, expenses and income have not been considered in the 2nd control period as AAICLAS would file proposal for cargo tariff for 2nd control period separately. However, as per further submission from AAI dated 12.10.2017, the Authority notes that the accounts for cargo operations are now booked (FY 2017-18) under AAICLAS for CIA. Hence, the Authority decides to include cargo operational expenditure from 01.04.2016 till 31.03.2017 and decides to exclude them from 01.04.2017 till 31.03.2021 while determination of tariff in the second control period. Further, the Authority will review its decision while truing up in the 3rd control period based on the decisions taken by the AAI.

13.15. The Authority has noted that CIA has installed a solar power plant of 15 MWp in FY 2016-17. As per the clarifications received on 08.12.2017, AAI submitted that the amount saving through solar power generation would be to the tune of ₹ 1.5 cr. in a year. Further, AAI submitted that the amount of savings in solar power has been offset by new facilities and increase in electricity charges. In addition to AAI clarification, the Authority noted that AAI has proposed no increase in the power charges in the 2nd control period. Hence, the Authority proposes to accept the power charges as submitted by AAI for the 2nd control period.

Correction in projection

13.16. The Authority noted that AAI has included financing charges as part of O&M expenses for the 2nd control period. The Authority proposes not to include interest payments on long term debt as a component of O&M expenses.

13.17. The Authority noted that there were summation errors in expenses related to R&M Furniture and Fittings and post and courier charges. As per the clarifications provided

by AAI on 26.08.2017, the Authority proposes to revise these expenses.

13.18. The O&M expenditure for FY 2015-16 which includes both aeronautical and non-aeronautical expense is given in the table below:

Table 40 – Total O&M expenditure for FY 2015-16 as proposed by the Authority

No.	Particulars (₹ crore)	2015-16
1	Pay roll Expenditure of CIA	124.6
2	Expenditure for CIA employees' retirement benefits allocated at CHQ	20.8
A	Total Pay roll Expenditure (1+2)	145.5
4	Administrative and General Expenditure	4.2
5	Apportionment of administration & General expenditure of CHQ/RHQ	27.2
B	Total Administration & General Expenditure(4+5)	31.4
C	Repairs and Maintenance Expenditure (Total)	65.7
6	Power Charges	77.8
7	Water Charges	1.7
8	Outsourcing expenses	15.1
D	Utility and Outsourcing Expenditure (6+7+8)	94.6
E	Other Outflows	17.6
	Total (A+B+C+D+E)	354.7

13.19. Expense allocation proposed to be considered by the Authority after above changes for 2nd control period is tabulated below:

Table 41 – Expense allocation between aeronautical and non-aeronautical services proposed by the Authority

Sr. No.	Particulars	Aero Expense	Non-Aero & Cargo Expense
1	Payroll Expenses - Non-CHQ	84%	16%
2	Payroll Retirement benefit expenses Apportionment – CHQ	85%	15%
3	Admin and General Expenses – Non CHQ	84%	16%
4	Admin and General overheads Expenses Apportionment – CHQ/RHQ	72%	28%
5	R&M Expenses	91%	9%
6	Utility and Outsourcing Charges	87%	13%
7	Other Outflows	87%	13%
	Total	86%	14%

13.20. In view of above, the O&M expenditure is reworked for the purpose of

determination of aeronautical tariffs for the 2nd control period under Hybrid Till and given in table below.

Table 42 - Summary of Aeronautical O&M expenditure as per the Authority for the 2nd control period as per Hybrid Till

No.	Particulars (₹ crore)	2016-17*	2017-18	2018-19	2019-20	2020-21
1	Pay roll Expenditure of CIA	127.5	153.7	161.4	169.5	178.0
2	Expenditure for CIA employees' retirement benefits allocated at CHQ	21.3	26.0	27.2	28.6	30.0
A	Total Pay roll Expenditure (1+2-3)	148.8	179.7	188.7	198.1	208.0
4	Administrative and General Expenditure	4.4	4.3	4.7	5.2	5.7
5	Apportionment of administration & General expenditure of CHQ/RHQ	26.3	21.7	22.8	23.9	25.1
B	Total Administration & General Expenditure(4+5)	30.7	25.9	27.5	29.1	30.8
C	Repairs and Maintenance Expenditure (Total)	71.3	72.3	79.5	87.5	96.2
6	Power Charges	77.7	69.1	69.1	69.1	69.1
7	Water Charges	1.7	1.7	1.7	1.7	1.7
8	Outsourcing Charges	15.8	14.5	15.9	17.5	19.3
D	Utility and Outsourcing Expenditure (6+7)	95.3	85.3	86.7	88.3	90.1
E	Other Outflows	13.6	12.2	12.8	13.4	14.1
	Total (A+B+C+D+E)	359.6	375.4	395.2	416.4	439.2

* FY 2016-17 includes cargo operational expenditure

13.21. The Authority proposes to undertake an independent study to assess the reasonableness of the operation and maintenance expenditure. The Authority would consider the results of the study to true-up the operation and maintenance expenditure while tariff determination for the 3rd control period.

13.22. It appears that O&M expenditure at CIA is on higher side and expects AAI to reduce the O&M expenditure over a period of time.

Proposal No. 10. Operation and Maintenance expenditure

10.a. The Authority proposes to consider the operational and maintenance expenditure as given in Table 42 above, for the purpose of determination of aeronautical tariffs for the 2nd control period.

10.b. The Authority expects AAI to reduce O&M expenditure over a period of time.

10.c. The Authority proposes to true up the O&M expenditure for FY 2016-17 to FY 2020-21 of the 2nd control period based on the actuals at the time of determination of tariffs for the 3rd control period.

14. Taxation

14.1. AAI has submitted tax calculations using provisional tax rate of 34.60 % for the 2nd control period. AAI had calculated the tax considering depreciation rates applicable under AAI depreciation policy.

Authority's Examination

Adjustment for 30% of non-aeronautical revenues

14.2. AAI vide their submissions dated 06.03.2017 calculated tax for aeronautical services under Hybrid Till taking into account 30% of revenues from services other than regulated services as part of total revenues. As per MIAL Order No. 32/2012-13 (Decision No. XV), the Authority had decided to consider corporate tax pertaining to earnings from aeronautical services under shared till. Therefore, the Authority proposes to exclude non-aeronautical component from revenues considered while determining tax for aeronautical services.

Adjustment of aeronautical capital expenditure

14.3. The Authority proposes to consider aeronautical capital expenditure of ₹ 1,143.8 crores as given in Table 28 while calculating depreciation as per IT Act

Adjustment of O&M Expenses

14.4. The Authority proposes to consider O&M expenses as given in Table 42.

Adjustment of aeronautical revenues on account of CGF lease and rent correction

14.5. The Authority proposes to modify total aeronautical revenues considering lease rentals from CGF as aeronautical as mentioned in para 12.10.

Continuation of existing tariffs in FY 2016-17

14.6. The Authority proposes to consider existing tariffs while calculating aeronautical revenues for FY 2016-17 as the revised tariffs as submitted by AAI are proposed to be applicable from 01.04.2018 onwards.

Revised Tax as considered by the Authority

14.7. The amount of tax as per submission of AAI and that arrived by the Authority after considering the above mentioned changes is given below:

Table 43 - Amount of Tax for aeronautical services as per AAI submission and as calculated by the Authority for the 2nd control period - Hybrid Till

Income Tax (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21	Total
As per AAI	73.7	28.6	8.2	0.0	0.0	110.5
As per Authority	153.9	95.7	0.0	0.0	0.0	249.6

14.8. The detailed calculation of tax for aeronautical service by the Authority is given in table below:

Table 44 - Amount of Tax for aeronautical services as calculated by the Authority for the 2nd control period - Hybrid Till

Particular (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Aeronautical Revenues	983.8	820.0	152.4	160.7	169.6
Aeronautical O&M (excluding CHQ/ RHQ Overheads)	312.1	327.8	345.2	363.9	384.1
CHQ/ RHQ Overheads	47.5	47.6	50.0	52.5	55.1
Depreciation as per IT Act	179.4	168.1	155.5	148.2	189.6
PBT	444.8	276.5	-398.2	-403.9	-459.2
Tax for aeronautical services	153.9	95.7	0.0	0.0	0.0

14.9. The taxes actually paid/ apportioned in the 2nd control period are proposed to be trued up after review in the next control period.

Proposal No. 11. Taxation

11.a. The Authority proposes the corporate tax for aeronautical activities as per Table 44 for the 2nd control period.

11.b. The Authority proposes to true up the difference between the actual/ apportioned corporate tax paid and that estimated by the Authority for the 2nd control period during determination of tariffs for the 3rd control period.

15. Aggregate Revenue Requirement for Second control period

15.1. AAI has submitted Aggregate Revenue Requirement (ARR) the yield per passenger (YPP) for the 2nd control period as per Hybrid Till. AAI has shown the true-up value separately from yield calculations for 2nd control period. During discussions, AAI had requested for including true-up while calculating tariff for 2nd control period.

Table 45 - ARR and Yield as per AAI for the 2nd control period – Hybrid Till

Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Average Aeronautical RAB	1,399.1	1,247.3	1,094.8	862.4	1,760.6
Return on Average Aeronautical RAB@14%	195.9	174.6	153.3	120.7	246.5
Aeronautical Operating Expenditure	354.5	382.5	403.5	431.6	462.2
Depreciation on aeronautical RAB	247.3	261.6	264.1	257.5	480.2
Aeronautical Corporate Tax @34.60%	73.7	28.6	8.2	0.0	0.0
Less- 30% of Non-Aeronautical Revenues	85.6	93.9	103.2	113.4	131.7
ARR as per AAI	785.9	753.4	725.9	696.5	1,057.2
Total ARR as per AAI	4,018.8				
No. of Passengers (as per Actual/Projected)	17,372,012	18,799,032	20,356,346	22,056,488	23,913,225
Discounted ARR	785.9	655.1	548.9	458.0	604.4
True up short fall in 1st control period as on 01.04.2016	150.4				
PV of ARR for the control period as on 01.04.2016	3,202.7				
Total Passengers during the control period	102,497,103				
Yield per passenger for the control period (PV of ARR for the control period/Total passengers during the control period)	312.5				

Authority's examination

15.2. The Authority has examined the calculations of AAI for various elements of the regulatory building blocks that contribute to the calculation of ARR.

15.3. The Authority has estimated the following ARR and yield for the 2nd control period under Hybrid Till based on various submissions of AAI and proposals considered by Authority in earlier sections on the building blocks.

Table 46 - ARR and Yield as per Authority for the 2nd control period – Hybrid Till

Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Average Aeronautical RAB	1,952.1	1,794.2	1,735.1	1,699.4	2,030.4
Return on Average Aeronautical RAB@14%	273.3	251.2	242.9	237.9	284.3
Aeronautical Operating Expenditure	359.6	375.4	395.2	416.4	439.2
Depreciation on aeronautical RAB	134.3	128.3	129.7	130.2	156.5
Aeronautical Corporate Tax @34.6%	153.9	95.7	0.0	0.0	0.0
Less – 30% of Non-Aeronautical Revenues	70.6	77.2	84.4	92.3	100.9
True up short fall (+)/ excess (-) in 1st control period as on 01.04.2016	-954.0				
ARR as per Authority	-103.5	773.5	683.4	692.2	779.0
Total ARR as per Authority					2,824.5
Discounted ARR	-103.5	678.5	525.9	467.2	461.2
PV of ARR for the control period as on 01.04.2016					2,029.3
No. of Passengers (as per Projected)	18,362,215	20,034,914	21,847,240	23,828,439	25,994,599
Total Passengers during the control period					110,067,406
Yield per passenger for the control period (PV of ARR for the control period/Total passengers during the control period)					184.4
Target yield per passenger	222.4	231.7	241.4	251.5	262.1
Target Aeronautical Revenues	408.3	464.2	527.4	599.3	681.2
PV of Target Aeronautical Revenues					2,029.3

16. Annual Tariff Proposal

16.1. AAI has submitted ATP(s) for all years of the 2nd control period.

16.2. AAI has submitted the revision in tariff w.e.f. 01.04.2017 till 31.03.2021.

16.3. Accordingly AAI has submitted the ATP(s) for 2nd control period in respect of CIA. The ATP(s) as submitted by AAI for the tariff year 2017-18 (w.e.f. 01.04.2017) is annexed herewith for stakeholder consultation.

Authority's Examination

16.4. As per para 6.11, the Authority decides to include cargo revenues from 01.04.2016 till 31.03.2017 and decides to exclude them from 01.04.2017 till 31.03.2021 while determination of tariff in the second control period. As there is no clarity on the revenue sharing mechanism between AAI and AAICLAS, the Authority has decided to not consider the potential revenue from cargo operations at this juncture. The Authority will take a view on this while truing up in the 3rd control period based on the decisions that may be taken by the AAI in the matter. The Authority may also make necessary assumptions regarding the revenue that should accrue to AAI in case the revenue share arrangement does not truly reflect arms-length transactions between AAI and its subsidiary.

16.5. The Authority noted that if the existing tariffs applicable at CIA are kept constant for the second control period, there will be an excess of ₹ 1,318.6 crore vis-à-vis ARR. The excess can either be reduced by decreasing various aeronautical charges such as Landing, Parking & Housing and fuel throughput or decreasing UDF/ PSF (F) or both the aeronautical and UDF/ PSF. Even with the reduction in UDF/ PSF (F) rates as proposed by AAI on 18.04.2017 (₹ 200 per domestic passenger and ₹ 400 per international passengers) and constant landing, parking & housing charges and fuel throughput charges there is still aeronautical revenue surplus of ₹ 1,249.9 crore is available vis-à-vis ARR.

Table 47 - Projected Revenue, Target Revenue and shortfall/ excess based on AAI proposed tariffs for the 2nd control period applicable from 01.04.2018

Projected Aero Revenue based on AAI proposed tariffs (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
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Landing (A)	299.9	305.6	323.8	343.2	363.7
Parking and Housing (B)	7.3	7.5	8.0	8.5	9.0
UDF/ PSF (F) as per existing rates (C)	282.9	301.8	325.6	351.3	379.2
FTP+ITP and lease rentals (D)	131.1	133.6	140.6	148.1	156.1
Ground Handling Charges and lease rentals (E)	49.6	50.6	53.6	56.8	60.2
CUTE (F)	19.3	21.0	22.9	25.0	27.3
Cargo Charges (G)	193.8	0.0	0.0	0.0	0.0
Total Projected Revenues with constant UDF/ PSF (F) (H = A+B+C+D+E+F+G)	983.8	820.0	874.5	933.0	995.7
Target Aero Revenue	458.1	520.8	591.7	672.4	764.3
Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	-525.7	-299.2	-282.8	-260.5	-231.4
PV value of shortfall (+)/ excess (-) as on 01.04.2016 with Discount rate (14.00%)	-525.7	-262.5	-217.6	-175.8	-137.0
Total PV of shortfall (+)/ excess (-) as on 01.04.2016 for the control period	-1,318.6				
UDF/ PSF (F) with revised rates proposed by AAI (I)	282.9	301.8	276.1	299.6	325.2
Total Projected Revenues with increased UDF (J = H-C+I)	983.8	820.0	825.0	881.2	941.6
Target Aero Revenue	450.8	512.5	582.3	661.7	752.1
Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	-533.0	-307.5	-242.7	-219.5	-189.5
PV value of short fall (+)/ excess (-) revenue as on 01.04.2016 with Discount rate (14.00%)	-533.0	-269.8	-186.8	-148.2	-112.2
Total PV of short fall (+)/ excess (-) difference as on 01.04.2016 for the control period	-1,249.9				

16.1. AAI vide their submission dated 14.12.2017 provided the revised rate card for CIA as shown in Table 48 below. The Authority noted with the revised tariffs as per AAI applicable from 01.04.2018, there will be an excess of ₹ 546.2 crore vis-à-vis ARR. Hence, the Authority proposes to reduce the tariffs as submitted by AAI such that the ARR is recovered through the revised tariffs. Accordingly, the UDF/ PSF (F) per departing passenger is revised to NIL and other aeronautical tariffs have been revised as per Table 48 which would be applicable from 01.04.2018.

16.2. The revised tariffs which would be applicable from 01.04.2018 as submitted by AAI and as proposed by the Authority are given in table below:

Table 48 - Revised aeronautical tariffs as submitted by AAI and as proposed by the Authority

Particular	Existing Tariff	Revised tariff by AAI submitted on 18.04.2017	Revised tariff by AAI submitted on 14.12.2017	Revised tariff proposed by Authority
Rate per landing - International Flight				
Up to 100 MT	₹ 650.4 per MT			
Above 100 MT	₹ 65,040 + ₹ 874.0 per MT in excess of 100 MT			
Up to 25 MT		₹ 550 per MT	₹ 248 per MT	₹ 60 per MT
Above 25 MT up to 50 MT		₹ 13,750 + ₹ 600 per MT in excess of 25 MT	₹ 6,200 + ₹ 270 per MT in excess of 25 MT	₹ 1,500 + ₹ 65 per MT in excess of 25 MT
Above 50 MT up to 100 MT		₹ 28,750 + ₹ 700 per MT in excess of 50 MT	₹ 12,950 + ₹ 315 per MT in excess of 50 MT	₹ 3,125 + ₹ 75 per MT in excess of 50 MT
Above 100 MT up to 200 MT		₹ 63,750 + ₹ 800 per MT in excess of 100 MT	₹ 28,700 + ₹ 360 per MT in excess of 100 MT	₹ 6,875 + ₹ 90 per MT in excess of 100 MT
Above 200 MT		₹ 1,43,750 + ₹ 900 per MT in excess of 200 MT	₹ 64,700 + ₹ 405 per MT in excess of 200 MT	₹ 15,875 + ₹ 100 per MT in excess of 200 MT
Rate per Landing - Domestic Flight				
Up to 100 MT	₹ 331.2 per MT			
Above 100 MT	₹ 33,120 + ₹ 445.1 per MT in excess of 100 MT			
Up to 25 MT		₹ 250 per MT	₹ 113 per MT	₹ 30 per MT
Above 25 MT up to 50 MT		₹ 6,250 + ₹ 330 per MT in excess of 25 MT	₹ 2,825 + ₹ 149 per MT in excess of 25 MT	₹ 750 + ₹ 35 per MT in excess of 25 MT
Above 50 MT up to 100		₹ 14,500 + ₹ 380 per MT in excess of 50 MT	₹ 6,550 + ₹ 171 per MT in excess of 50 MT	₹ 1,625 + ₹ 40 per MT in excess of 50 MT
Above 100 MT up to 200 MT		₹ 33,500 + ₹ 430 per MT in excess of 100 MT	₹ 15,100 + ₹ 194 per MT in excess of 100 MT	₹ 3,625 + ₹ 45 per MT in excess of 100 MT
Above 200 MT		₹ 76,500 + ₹ 480 per MT in excess of 200 MT	₹ 34,500 + ₹ 216 per MT in excess of 200 MT	₹ 8,125 + ₹ 55 per MT in excess of 200 MT

Particular	Existing Tariff	Revised tariff by AAI submitted on 18.04.2017	Revised tariff by AAI submitted on 14.12.2017	Revised tariff proposed by Authority
Housing Charges				
Up to 100 MT	₹ 17.70 per MT per hour	₹ 21.1 per MT per hour	₹ 10.6 per MT per hour	₹ 2.3 per MT per hour
Above 100 MT	₹ 1,770 + ₹ 23.50 per MT per hour in excess of 100 MT	₹ 2,110 + 28.20 per MT per hour in excess of 100 MT	₹ 1,060 + ₹ 14.1 per MT per hour in excess of 100 MT	₹ 230 + ₹ 3.1 per MT per hour in excess of 100 MT
Parking Charges				
Up to 100 MT	₹ 8.90 per MT per hour	₹ 10.8 per MT per hour	₹ 5.3 per MT per hour	₹ 1.2 per MT per hour
Above 100 MT	₹ 890 + ₹ 11.80 per MT per hour in excess of 100 MT	₹ 1,080 + ₹ 14.2 per MT per hour in excess of 100 MT	₹ 530 + ₹ 7.1 per MT per hour in excess of 100 MT	₹ 120 + ₹ 1.6 per MT per hour in excess of 100 MT
Throughput Charges				
Rate per KL	₹ 1,774.4	₹ 1,774.4	₹ 630.0	₹ 196.0
Passenger Service Fee (PSF) – Facilitation				
Domestic Passenger (per embarking passenger)	Nil	₹ 200	₹ 100	Nil
International Passenger (per embarking passenger)	Nil	₹ 400	₹ 100	Nil
User Development Fee (UDF) (UDF proposed by Authority instead of PSF(FC) above)				
Domestic Passenger (per embarking passenger)	₹ 166	Nil	Nil	Nil
International Passenger (per embarking passenger)	₹ 667	Nil	Nil	Nil
Passenger Service Fee (PSF) – Security*				
Domestic Passenger (per embarking passenger)	₹ 130	₹ 130	₹ 130	₹ 130
	\$ 3.25	\$ 3.25	\$ 3.25	\$ 3.25
International Passenger (per embarking passenger)	₹ 130	₹ 130	₹ 130	₹ 130
	\$ 3.25	\$ 3.25	\$ 3.25	\$ 3.25

* PSF-Security is determined by MoCA and the rates as provided by MoCA from time to time shall be applicable

16.3. The Authority notes from the proposed tariffs that:

16.3.1. UDF charges per domestic and international passenger have been made NIL

16.3.2. Domestic and international landing charges are reduced by approximately 89%. Further, the Authority has noted that, as an approximation, proposed landing tariffs of domestic ATM of 70 MT (approximate weight for majority of domestic aircrafts) has been reduced by 89% from existing tariffs.

16.3.3. Parking and housing landing charges are reduced by approximately 89%

16.3.4. Fuel throughput charges are reduced by approximately 89%

The exact rates are specified in the tariff card.

16.4. Additionally, from 01.04.2018, AAI as per their submission dated 14.12.2017 has proposed no increase in the tariffs for the rest of the control period. The Authority proposes to accept no increase in tariffs for rest of the second control period as per the submission of AAI.

16.5. The estimated aeronautical revenues based on tariffs as proposed by the Authority is indicated in Table 49.

Table 49 - Projected Revenue, Target Revenue and shortfall/ excess as per the Authority for the 2nd control period

Projected Aero Revenue based on the Authority proposed tariffs (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Landing (A)	299.9	305.6	35.7	37.9	40.1
Parking and Housing (B)	7.3	7.5	0.9	0.9	1.0
UDF/PSF (F) as per existing rates (C)	282.9	301.8	0.0	0.0	0.0
FTP+ITP and lease rentals (D)	131.1	133.6	39.3	40.1	41.0
Ground Handling charges and lease rentals (E)	49.6	50.6	53.6	56.8	60.2
CUTE (F)	19.3	21.0	22.9	25.0	27.3
Cargo charges (G)	193.8	0.0	0.0	0.0	0.0
Total Projected Revenue as per existing UDF/PSF (H = A+B+C+D+E+F+G)	983.8	820.0	152.4	160.7	169.6
Target Aero Revenue	408.3	464.2	527.4	599.3	681.2
Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	-575.5	-355.8	375.0	438.7	511.6

Projected Aero Revenue based on the Authority proposed tariffs (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
PV value shortfall (+)/ excess (-) as on 01.04.2016 with Discount rate (14.00%)	-575.5	-312.1	288.6	296.1	302.9
Total PV shortfall (+)/ excess (-) of difference as on 01.04.2016 for the control period	0.0				

16.6. The Authority noted that AAI has taken 6% inflation rate while determining the Yield per Passenger for tariff years in the 2nd control period and X factor of 0.01% from FY 2018-19 onwards. As per RBI issued Results of the Survey of Professional Forecasters on Macroeconomic Indicators – Round 45, the WPI inflation is forecasted to be 4.2% for the next 5 years. The Authority proposes to revise WPI for the 2nd control period to 4.2%.

16.7. The Authority proposes that any shortfall/ excess in revenues for the 2nd control period based on proposed tariffs by AAI to be considered while determining aeronautical tariffs for the 3rd control period.

16.8. The Authority notes that ASQ rating at CIA has been less than 3.75 for a few quarters of 1st control period. However, the Authority further notes that in majority of the quarters in 1st control period the quarterly ASQ rating is more than 3.75 as required under Section 6.14.3 of Airport Guidelines. The Authority expects AAI to maintain ASQ rating above 3.75 in 3rd control period. Details of the ASQ ratings are provided below.

Table 50 – Quarterly ASQ rating of CIA during the 1st control period

Quarter	2012	2013	2014	2015	2016
Q1	3.27	3.80	4.10	4.42	4.66
Q2	3.02	3.86	4.30	4.46	4.66
Q3	3.07	3.93	4.31	4.50	4.62
Q4	3.47	4.16	4.31	4.51	4.57
Average	3.21	3.94	4.26	4.47	4.63

Proposal No. 12. Tariff rate card

12.a. The Authority proposes to accept Annual Tariff Proposals as given in Table 48 (and Annexure) for determination of tariff during 2nd control period. Detailed tariff card is

provided in Annexure for stakeholder comments.

- 12.b. The Authority proposes to continue with waiver of landing charges for (a) aircraft with a maximum certified capacity of less than 80 seats, being operated by domestic scheduled operators (b) Helicopters of all types as approved by Govt. of India vide order no. G.17018/7/2001- AAI dated 09.02.2004 in order to encourage and promote intra-regional connectivity at CIA.
- 12.c. The Authority decides to provide waiver of landing and other charges in line with the Order No. 20/ 2016-17 dated 31.03.2017 of the Authority.
- 12.d. The Authority proposes to consider shortfall/ excess in revenues for the 2nd control period based on proposed tariffs by AAI while determining aeronautical tariffs for the 3rd control period.

17. Summary of Proposals

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18. Stakeholders' Consultation Timeline

18.1. In accordance with the provision of Section 13(4) of the AERA Act, 2008, the proposal contained in the Section – Summary of proposals (Section 17 above) read with the relevant discussion in the other sections of the paper is hereby put forth for Stakeholders' Consultation. To assist the Stakeholders in making their submissions in a meaningful and constructive manner, necessary documents are enclosed as **Annexure I**. For removal of doubts, it is clarified that the contents of this consultation paper may not be construed as any Order or Direction by the Authority. The Authority shall pass an order, in the matter, only after considering the submissions of the stakeholders' in response hereto and by making such decisions fully documented and explained in terms of the provisions of the Act.

18.2. The Authority welcomes written evidence based feedback, comments and suggestions from stakeholders on the proposals made in (Section 17 above), latest by 12.03.2018 at the following address.

Secretary

Airports Economic Regulatory Authority of India

AERA Building, Administrative Complex Safdarjung Airport

New Delhi -110003

Tel: 011-24695043, Fax: 011-24695039

Email: puja.jindal@nic.in

(Mr. S. Machendranathan)
Chairperson

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Annexure 1 – Detailed Tariff Card as proposed by the Authority to be applicable from 01.04.2018

I) LANDING CHARGES

Rate per landing - International Flight

Weight of the Aircraft	Proposed - Rate Per Landing (In ₹)
Up to 25 MT	₹ 60 per MT
Above 25 MT up to 50 MT	₹ 1,500 + ₹ 65 per MT in excess of 25 MT
Above 50 MT up to 100 MT	₹ 3,125 + ₹ 75 per MT in excess of 50 MT
Above 100 MT to 200 MT	₹ 6,875 + ₹ 90 per MT in excess of 100 MT
Above 200 MT	₹ 15,875 + ₹ 100 per MT in excess of 200 MT

Rate per Landing - Domestic Flight

Weight of the Aircraft	Proposed - Rate Per Landing (In ₹)
Up to 25 MT	₹ 30 per MT
Above 25 MT up to 50 MT	₹ 750 + ₹ 35 per MT in excess of 25 MT
Above 50 MT up to 100 MT	₹ 1,625 + ₹ 40 per MT in excess of 50 MT
Above 100 MT to 200 MT	₹ 3,625 + ₹ 45 per MT in excess of 100 MT
Above 200 MT	₹ 8,125 + ₹ 55 per MT in excess of 200 MT

Note

	Proposed
1)	No Landing charges shall be payable in respect of a) Aircraft with a maximum certified capacity less than 80 seats, being operated by Domestic Scheduled operators at airport and b) Helicopters of all types c) DGCA approved Flying school/Flying Training Institute aircrafts.
2)	All Domestic legs of International routes flown by Indian Operators will be treated as domestic flights as far as landing fees is concerned, irrespective of flight number assigned to such flights.
3)	Charges shall be calculated on the basis of nearest MT (i.e. 1000 Kg.).

II) PARKING AND HOUSING CHARGES

	Proposed Rates (In ₹)	Proposed Rates (In ₹)
Weight of the Aircraft	Parking Charges Rates per Hour	Housing Charges Rates per Hour
Up to 100 MT	₹ 1.2 per MT per hour	₹ 2.3 per MT per hour
Above 100 MT	₹ 120 + ₹ 1.6 per MT per hour in excess of 100 MT	₹ 230 + ₹ 3.1 per MT per hour in excess of 100 MT

Note

Proposed	
1)	No parking charges shall be levied for the first two hours. While calculating free parking period, standard time of 15 minutes shall be added on account of time taken between touch down time and actual parking time on the parking stand. Another standard time of 15 minutes shall be added on account of taxing time of aircraft from parking stand to take off point. These periods shall be applicable for each aircraft irrespective of actual time taken in the movement of aircraft after landing and before takeoff.
2)	For calculating chargeable parking time any part of an hour shall be rounded off to the next hour.
3)	Charges shall be calculated on the basis of nearest MT.
4)	Charges for each parking period shall be rounded off to nearest Rupee
5)	At the in-contact stands and open stands, after free parking, for the next two hours normal parking charges shall be levied. After this period, the charges shall be double the normal parking charges.

III) THROUGHPUT CHARGES

Proposed Rate Per KL (IN ₹)
₹ 196.0

IV) PASSENGER SERVICE FEE (PSF) – SECURITY*

Proposed per embarking passenger	
₹ 130	\$ 3.25

* PSF-Security is determined by MoCA and the rates as provided by MoCA from time to time shall be applicable

Notes

1)	Collection charges: if the payment is made within 15 days of receipt of invoice, then collection charges at 2.50% of PSF per passenger shall be paid by AAI. No collection charges shall be paid in case the airline fails to pay the PSF to AAI within the credit period of 15 days. Wherever collection charges are payable the amount shall be settled within 15 days.
2)	No PSF (Security) will be levied for Transit Passengers.
3)	For conversion of US \$ into ₹ the rate as on 1 st day of the month for 1 st fortnightly billing period and rate as on 16 th of the month for the 2 nd fortnightly billing period shall be adopted. If the payment is made within 15 days of receipt of bills, then collection at 2.5% of PSF per passenger is payable.

V) Exemption from levy and collection from PSF (SC) at the Airports

The Ministry of Civil Aviation, Govt. of India vide order no. AV.16011/002/2008-AAI dated 30.11.2011 has directed AAI to exempt the following categories of persons from levy and collection of PSF (Security).

- (a) Children (under age of 2 years),
- (b) Holders of Diplomatic Passport,
- (c) Airlines crew on duty including sky marshals & airline crew on board for the particular flight only (this would not include Dead Head Crew, or ground personnel),
- (d) Persons travelling on official duty on aircraft operated by Indian Armed Forces,
- (e) Persons traveling on official duty for United Nations Peace Keeping Missions.
- (f) Transit/transfer passengers (this exemption may be granted to all the passengers transiting up to 24 hrs. "A passenger is treated in transit only if onward travel journey is within 24 hrs. from arrival into airport and is part of the same ticket, in case 2 separate tickets are issued it would not be treated as transit passenger").
- (g) Passengers departing from the Indian airports due to involuntary re-routing i.e. technical problems or weather conditions.

VI) GENERAL CONDITION:

- a) Flight operating under Regional Connectivity Scheme will be completely exempted from charges as per Order No. 20/ 2016-17 dated 31.03.2017 of the Authority from the date the scheme is operationalized by GOI.
- b) All the above Charges are excluding GST. GST at the applicable rates are payable in addition to above charges.

Annexure 2 – Comparison of ARR with the projected Aeronautical Revenues for 2nd control period

S. No.	Particulars	2017	2018*	2019	2020	2021
Traffic Assumptions						
1	Domestic ATMs	111,331	114,351	122,356	130,921	140,085
2	International ATMs	36,436	36,931	38,877	40,926	43,083
3	Total ATMs	147,767	151,283	161,233	171,847	183,168
4	Domestic Passengers	13,153,967	14,626,758	16,089,434	17,698,378	19,468,216
5	International Passengers	5,208,248	5,408,155	5,757,805	6,130,061	6,526,384
6	Total Passengers	18,362,215	20,034,914	21,847,240	23,828,439	25,994,599
7	Fuel throughout (kL)	588,545	602,547	642,180	684,454	729,545
Aeronautical Revenues						
	Landing Charges					
8	Average landing charges per departing domestic ATM (₹)	21705	21705	2394	2394	2394
9	<i>Growth in average landing charges per departing domestic ATM (₹)</i>			-89%	0%	0%
10	Landing Charges - Domestic ATM (₹ cr.)	120.8	124.1	14.6	15.7	16.8
11	Average landing charges per departing international ATM (₹)	98284	98284	10841	10841	10841
12	<i>Growth in average landing charges per departing International ATM (₹)</i>			-89%	0%	0%
13	Landing Charges - International ATM (₹ cr.)	179.1	181.5	21.1	22.2	23.4
14	Total Landing Charges (Dom + Int)	299.9	305.6	35.7	37.9	40.1
	Parking and Housing Charges:					
15	Parking and Housing Average Revenue per departing ATM (Dom+Int)	987	987	109	109	109
16	<i>Growth in Parking and Housing charges per departing ATM (Dom+Int)</i>			-89%	0%	0%
17	Total Parking and Housing Charges (Dom + Int)	7.3	7.5	0.9	0.9	1.0

S. No.	Particulars	2017	2018*	2019	2020	2021
	User Development Fee (UDF)					
18	Domestic UDF per departing passenger (₹)	166	166	0	0	0
19	<i>Growth in Domestic UDF per departing passenger (%)</i>			-100%	0%	0%
20	Revenues from Domestic UDF (₹ cr.)	109.2	121.4	0.0	0.0	0.0
21	International UDF per departing passenger (₹)	667	667	0	0	0
22	<i>Growth in International UDF per departing passenger (%)</i>			-100%	0%	0%
23	Revenues from International UDF (₹ cr.)	173.7	180.4	0.0	0.0	0.0
24	Total UDF (₹ cr.)	282.9	301.8	0.0	0.0	0.0
	Fuel Throughput Charges (FTC)					
25	FTC (₹ per kL)	1774.43	1774.43	195.7	195.7	195.7
26	Revenues from FTC (₹ cr.)	104.4	106.9	12.6	13.4	14.3
	Ground Handling Charges	44.6	45.7	48.7	51.9	55.3
28	<i>Growth in ground handling charges as per increase in ATMs</i>		2.4%	6.6%	6.6%	6.6%
29	Cute services	19.3	21.0	22.9	25.0	27.3
30	<i>Growth in CUTE charges as per increase in passengers</i>		9.1%	9.0%	9.1%	9.1%
31	Land lease from ground handling agencies	4.9	4.9	4.9	4.9	4.9
32	<i>Growth as per contracts</i>		0.0%	0.0%	0.0%	0.0%
33	Land lease from oil companies	26.7	26.7	26.7	26.7	26.7
34	<i>Growth as per contracts</i>		0.0%	0.0%	0.0%	0.0%
35	Cargo revenues	193.8	0.0	0.0	0.0	0.0
36	Total aeronautical revenues	983.8	820.0	152.4	160.7	169.6
37	Target Aero Revenue	408.3	464.2	527.4	599.3	681.2
38	Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	-575.5	-355.8	375.0	438.7	511.6

S. No.	Particulars	2017	2018*	2019	2020	2021	
39	PV value shortfall (+)/ excess (-) as on 01.04.2016 with Discount rate (14.00%)	-575.5	-312.1	288.6	296.1	302.9	
40	Total PV shortfall (+)/ excess (-) of difference as on 01.04.2016 for the control period						0.0

* For FY 2017-18, existing tariffs are applicable till 31.03.2018 and revised tariffs are applicable from 01.04.2018 onwards.