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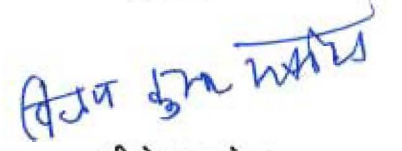
भारतीय विमानपत्तन आर्थिक विनियामक प्राधिकरण
ऐरा भवन, प्रशासनिक कॉम्पलेक्स,
सफदरजंग एयरपोर्ट,
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दिनांक : 1 सितंबर, 2017

विषय: गोवा अंतरराष्ट्रीय हवाई अड्डे के दूसरे नियंत्रण अवधि (01.04.2017 से 31.03.2021) के लिए संबंध में सिविल एन्क्लेव में वैमानिक टैरिफ के निर्धारण के मामले में

उपर्युक्त विषय पर दिनांक 01.09.2017 का परामर्श पत्र संख्या 18/2017-18 सूचना एवं टिप्पणी के लिए संलग्न है।

भवदीय,



(वी.के. सचदेवा)

उप महा प्रबंधक (वित्त)

सेवा में,

सभी पणधारी

Consultation Paper No. 18/2017-18



In the matter of determination of aeronautical tariffs at Civil Enclave in respect of Goa International Airport for the second Control Period (01.04.2016 – 31.03.2021).

1st September, 2017

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

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1. Introduction

1.1. Goa International Airport more commonly known as Dabolim Airport, is an international airport located in Goa, India. It is the only airport in the state and Airports Authority of India (AAI) operates the civil enclave in a military airbase named INS Hansa.

1.2. AAI operates the passenger terminal building and the civil apron while the Indian Navy provides the airside facilities and air navigation services. The traffic handled by the civil enclave at Goa during the 1st control period is given in table below:

Table 1 - Passenger and ATM traffic during the 1st control period at civil enclave Goa

Year	Dom. Pax (mn)	Int. Pax (mn)	Total Pax (mn)	Dom. ATMs	Int. ATMs	Total ATMs
2012	2.94	0.58	3.52	23560	3870	27430
2013	2.89	0.66	3.54	22725	4085	26810
2014	3.15	0.74	3.89	24478	4426	28904
2015	3.90	0.61	4.51	29117	4305	33422
2016	4.73	0.65	5.38	34604	4426	39030

1.3. The civil enclave at Goa, 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.

1.4. Technical and Terminal building details of civil enclave at Goa are provided in the table below:

Table 2 – Technical and Terminal building details of civil enclave Goa

Technical Details of civil enclave Goa	
Particulars	Details
Total airport area	44.25 acres (Civil Enclave)
Runway orientation and length	08-26; 3635 metres (Indian Navy)
No. of Taxi Tracks	02 (Civil Apron)
No. of Apron Bays	08 (Civil Apron)
Aerodrome Category	D
Navigational Aids	NDB, DVOR/ DME, ILS
Terminal building Details	
Particulars	Integrated Terminal Building
Terminal Building Area	64,700 sq. m.
Immigration Counters	Arrival – 18+10 and Departure – 12
Customs Counters	Arrival – 4 and Departure – 3
Security Counters	Domestic - 9; International – 4
Departure Conveyor	4

Arrival Conveyor	6
Particulars	Integrated Terminal Building
Peak hour passenger capacity	Dep – 1000; Arrival – 375
No. of Check-in Counters (CUTE)	64
Total Area of Car Parking	3,157 sq. m.

1.5. The Authority notes that MoCA has authorised the setting up of a new airport at Mopa in Goa and the airport operator who will take up the work of construction and operation of the airport has also been selected. The Authority has not considered the impact of the new airport on the traffic of the existing airport since the new airport may not commence commercial operations during this control period.

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 12.1.2017 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 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 civil enclave at Goa, 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

2.5.2. Adopt depreciation rates consistent with Companies Act and for assets not defined in the Companies Act at 3.33%.

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.

3. Multi Year Tariff Proposal for civil enclave at Goa

- 3.1. In the 1st control period, the Authority, vide its Order No. 17/2015-16 dated 11.05.2015 had decided that the tariffs for the civil enclave at Goa would continue at the existing level on ad-hoc basis till 31.03.2016 and advised AAI to submit MYTP for the 2nd control period well in time by providing details of assets created by it and sitting in its books, the operating expenditure pertaining to such civil enclaves being incurred by AAI and details of other building blocks only pertaining to AAI. The Authority would accordingly determine the Parking and Housing charges and PSF/ UDF to be levied by AAI.
- 3.2. Accordingly, AAI made submissions dated 01.04.2016 to the Authority for determination of tariffs for 2nd control period as per single till. Subsequent to the announcement of National Civil Aviation Policy, AAI made revised submissions under hybrid till on 01.03.2017. AAI has further revised their submission under hybrid till on 17.05.2017 as part of clarifications. The Authority has adopted the model proposed by AAI on 01.03.2017 and considered subsequent submissions made by AAI for this consultation paper.
- 3.3. AAI collects parking, housing, fuel throughput and other aeronautical charges at civil enclave Goa except for landing charges. The Authority noted that landing charges at civil enclave Goa are collected by Indian Navy as it is a civil enclave and the runway is maintained by the Navy. Further, the Authority notes that the Communication, Navigation, Surveillance/ Air Traffic Management (CNS/ATM) services at civil enclave Goa are provided by Indian Navy. AAI has submitted that the tariff proposal does not consider revenues, expenditure and assets on account of CNS/ ATM and runway assets. This consultation paper discusses the determination of tariffs for aeronautical services at the airport excluding CNS/ ATM services and landing charges.
- 3.4. The Authority notes that Indian Navy has submitted the MYTP for the 2nd control period on 29.08.2016. The Authority notes that the MYTP submission of Indian Navy is incomplete and the Authority shall deal with the proposal separately.
- 3.5. 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 civil enclave at Goa. 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 ₹ 23.8 crore.

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

S. No.	Particulars	Amount (₹ crore)
1	Original Cost of Airport Assets excluding CNS/ATM related assets as on 01.04.2011	67.0
2	Accumulated Depreciation as on 01.04.2011	43.2
3	Opening RAB[(1)-(2)] as on 01.04.2011	23.8

Permissible aeronautical revenues

4.3. AAI has calculated Aggregate Revenue Requirement of ₹ 229.1 crore (PV of ARR is ₹ 160.3 crore 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	23.8	25.0	21.9	226.9	254.0
Assets capitalized during the year	6.4	2.1	229.3	56.0	2.0
Disposals/ Transfer	0	0	0	0	0
Depreciation	5.2	5.1	24.3	28.9	28.9
Closing RAB	25.0	21.9	226.9	254.0	227.2
Average RAB	24.4	23.5	124.4	240.5	240.6
Return on Average RAB@14%	3.4	3.3	17.4	33.7	33.7
Operating Expenditure	21.6	23.2	29.8	36.1	37.2
Depreciation	5.2	5.1	24.3	28.9	28.9
Corporate Tax	5.7	9.5	0.0	0.0	0.0
Less- Revenue from services other than Regulated services	22.2	27.3	23.1	20.2	25.0
ARR	13.8	13.8	48.4	78.4	74.7
Total ARR	229.1				
Discounted ARR	13.8	12.1	37.3	52.9	44.2
PV of ARR for the control period as on 01.04.2012	160.3				

Actual aeronautical revenues

4.4. AAI has submitted that it has earned ₹ 126.4 crore during the 1st control period.

Correspondingly, AAI has submitted that it has a shortfall of ₹ 143.7 crore (future value as on 01 April 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	0.0	0.0	0.0	0.0	0.0
1.2	International	0.0	0.0	0.0	0.0	0.0
1.3	Total Landing Charges	0.0	0.0	0.0	0.0	0.0
2	Parking and Housing Charges:	0.1	0.1	0.1	0.1	0.1
3	PSF(Facilitation Charges(FC)):					
3.1	Domestic	11.1	10.9	12.9	16.3	19.4
3.2	International	2.3	2.7	3.7	2.5	2.8
3.3	Total PSF (FC)	13.4	13.6	16.5	18.8	22.2
4	Fuel Throughput Charges	1.2	1.0	1.2	1.5	1.7
5	Ground Handling Charges	2.7	4.1	4.4	6.0	7.6
6	Cargo revenues	0.0	0.0	0.0	0.0	0.0
7	CUTE services	0.8	1.8	2.6	2.1	2.8
	Total Aeronautical Revenues	18.1	20.6	24.8	28.6	34.4

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	13.8	13.8	48.4	78.4	74.7	229.1
2	Aeronautical Revenue	18.1	20.6	24.8	28.6	34.4	126.4
3	Shortfall (+ve)/ Excess (-ve)	-4.3	-6.8	23.7	49.8	40.4	102.7
4	Future Value of shortfall as on 01.04.2017	-9.4	-13.1	40.0	73.8	52.5	143.7

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 depreciation
- 4.5.2. Adjustment of non-aeronautical revenues
- 4.5.3. Apportionment of CHQ/RHQ costs and change in tax calculation
- 4.5.4. Correction of present value factor for shortfall calculation

Adjustment for Depreciation

4.6. 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 7 - Depreciation rates as submitted by AAI

No.	Asset Class	As per AAI
1	Land	0.00%
2	Runways, Taxiways, Aprons - Freehold	13.00%
3	Road, Bridges & Culverts	13.00%
4	Terminal and Other Buildings	8.00%
5	Building Temporary	100.00%
6	Building – Residential	5.00%
7	Security Fencing - Temporary	100.00%
8	Other Buildings - Unclassified	8.00%
9	Computers & IT Hardware & Accessories	20.00%
10	Intangible Assets - Computer Software	20.00%
11	Plant & Equipment - Freehold	11.00%
12	Tools & Equipments	20.00%
13	Office Furniture & Fixtures	20.00%
14	Vehicles – Freehold	14.00%
15	Electrical Installations	11.00%
16	Office Appliances - Freehold	18.00%
17	Furniture & Fixtures – Freehold – Operational Area	20.00%
18	X-Ray Baggage Inspection System	11.00%
19	C.F.T./ Fire Fighting Equipment	13.00%

4.7. The Authority proposes the following depreciation rates

- 4.7.1. For asset types not defined under Companies Act (runway, taxiway and aprons): 3.33% based on useful life of 30 years
- 4.7.2. 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 31.

4.8. Depreciation for the 1st control period has been calculated on the basis of actual date of capitalization of assets. The Authority also noted that while calculating accumulated depreciation as on 01.04.2011 to calculate initial RAB, reference year of capitalization for some of the assets is not linked correctly. The Authority proposes to correct the linkages of reference year of capitalization for such assets.

4.9. The revised depreciation for the 1st control period under single till is given below:

Table 8 – Authority's consideration on 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	5.2	5.1	24.3	28.9	28.9	92.3
2	As per Authority	1.7	1.8	6.3	14.0	14.0	37.9

4.10. AAI has taken the cost of land in to 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.

4.11. It is therefore proposed to exclude the existing cost of land (₹ 0.32 cr. in FY 2011-12) as well as any additions (₹ 0.0 cr. in 1st control period) from the RAB till a final decision is taken on the issue.

4.12. The change in depreciation rates and exclusion of land from RAB results in a change in average RAB of the 1st control period as shown below –

Table 9 – 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	23.8	25.0	21.9	226.9	254.0
	Additions	6.4	2.1	229.3	56.0	2.0
	Disposals	0	0	0	0	0
	Depreciation	5.2	5.1	24.3	28.9	28.9
	Closing RAB	25.0	21.9	226.9	254.0	227.2

No	Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
	Average RAB	24.4	23.5	124.4	240.5	240.6
2	As per Authority					
	Opening RAB	23.5	28.1	28.4	251.3	293.3
	Additions	6.4	2.1	229.3	56.0	2.0
	Disposals	0	0	0	0	0
	Depreciation	1.7	1.8	6.3	14.0	14.0
	Closing RAB	28.1	28.4	251.3	293.3	281.3
	Average RAB	25.8	28.2	139.8	272.3	287.3

Adjustment for Non-Aeronautical revenues

4.13. The Authority noted that AAI has considered lease rental revenues from ground handling agencies 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 are aeronautical services.

4.14. 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.

Table 10 – 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)	22.2	27.3	23.1	20.2	25.0
Adjustment					
<i>Revenue from Ground handling treated as aeronautical (2)</i>	0.1	0.1	0.2	0.3	0.6
NAR as per Authority (3 = 1 - 2)	22.1	27.2	22.9	19.9	24.4

Adjustment for operating expenditure (CHQ/ RHQ expenditure apportionment)

4.15. 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 consist of three components – Expenditure for civil enclave Goa employee's retirement benefit allocated at CHQ, overheads at CHQ and overheads at RHQ. The CHQ/ RHQ expense considered for apportionment have been netted off against the income received by CHQ/ RHQ.

4.16. The retirement benefit is allocated on the basis of number of employees at civil enclave Goa. The Authority proposes to allocate the CHQ/ RHQ 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/ RHQ overhead expenses are allocated in proportion to the capacity of the airport to absorb higher cost of CHQ/ RHQ. Under this methodology, a portion of CHQ/ RHQ expenses are allocated to Delhi and Mumbai airports based on revenue received by AAI from these airports.

Table 11 - 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
1	Western Region - RHQ Expenses	61.9	126.3	152.6	78.1	72.6
2	Less - Western Region - RHQ Revenues	7.1	32.4	1.6	9.0	16.5
3	Net Western Region RHQ Expenses (1-2)	54.7	93.9	151.0	69.1	56.1
	Total of Net CHQ and RHQ Expenses	220.3	272.5	271.3	229.6	233.0
	CHQ/RHQ Overheads allocated to Goa	6.7	9.7	10.1	5.8	5.3
	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 Goa	1.0	2.8	1.3	2.3	1.7

4.17. Further, the Authority noted that retirement benefits at CHQ for civil enclave Goa has been excluded from staff cost while allocating the common expenses of Finance and HR employees for ANS services. The Authority proposes to allocate common expenses of Finance and HR employees for ANS services after including the retirement benefits at CHQ for civil enclave Goa.

4.18. The Authority observed that AAI has allocated 50% of the ANS staff expense under airport payroll costs. AAI vide their submissions dated 17.05.2017 submitted that the staff deputed at Goa Airport (Civil Enclave) for CNS/ ATC is also working for airport activities as ATC work is performed by Defence Authorities. Hence, 50% staff related costs of CNS / ATC staff is taken as cost of airport activities. Further, the AAI vide their

submissions dated 06.08.2017 submitted that the expenses of the ANS/ CNS employees working exclusively for airport would be booked under airport from the FY 2017-18 onwards. The Authority proposes to consider 50% of the ANS staff cost as the airport payroll costs since these employees have been working in airport activities for the 1st control period.

4.19. AAI vide their submissions dated 17.05.2017 submitted the revised payroll costs for FY 2011-12 and FY 2012-13 as per the actuals. The Authority proposes to consider the revised payroll costs for FY 2011-12 and FY 2012-13 since these are based on actuals.

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

Table 12 - 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 civil enclave Goa	9.1	7.0	8.0	10.0	10.8
2	Expenditure for civil enclave Goa employees' retirement benefits allocated at CHQ	1.0	2.8	1.3	2.3	1.7
A	Total Pay roll Expenditure (1+2)	10.1	9.8	9.3	12.3	12.4
3	Administrative and General Expenditure	1.9	1.9	1.6	2.7	2.6
4	Apportionment of administration & General expenditure of CHQ/RHQ	6.7	9.7	10.1	5.8	5.3
B	Total Administration & General Expenditure(3+4)	8.7	11.6	11.7	8.4	7.9
C	Repairs and Maintenance Expenditure	2.7	2.6	2.4	3.2	4.5
5	Power Charges	1.7	1.8	2.4	7.1	7.3
6	Water Charges	0.2	0.2	0.3	0.7	0.5
7	Consumption of Stores and Spares	0.1	0.1	0.0	0.1	0.1
D	Utility and Outsourcing Expenditure	2.1	2.1	2.7	7.9	7.8
E	Other Outflows	0.1	0.2	0.1	0.3	0.3
	Total (A+B+C+D+E)	23.6	26.4	26.1	32.1	32.9

Adjustment in base year for calculating present value of shortfall

4.21. The Authority noted that the present value factor considered by AAI for the shortfall 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 as on 01.04.2016.

Tax calculation for 1st control period

4.22. The tax calculation as submitted by AAI for 1st control period apportions actual tax liability of AAI based on the profit before tax of civil enclave Goa and profit before tax of AAI.

4.23. 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 civil enclave Goa 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.

4.24. AAI has submitted revised tax calculations based on standalone financials of civil enclave Goa. The Authority proposes to consider the tax calculation as given below.

Table 13 – 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	18.1	20.7	25.0	28.9	35.0
Non-Aeronautical Revenues	22.1	27.2	22.9	19.9	24.4
O&M (excluding retirement benefits and CHQ/ RHQ Overheads)	15.9	13.8	14.8	24.0	25.9
Retirement benefits and CHQ/ RHQ Overheads	7.7	12.5	11.4	8.1	7.0
Depreciation as per IT Act	4.1	3.8	27.4	30.5	27.4
PBT	12.5	17.7	-5.7	-13.8	-0.8
Tax	4.0	5.7	0.0	0.0	0.0

Revised Aggregate Revenue Requirement

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

4.25.1. Change in depreciation rates as per Table 31

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

4.25.3. Lease rentals from ground handling agencies to be treated as aeronautical revenues

4.25.4. Correction of present value factor for shortfall calculation

Table 14 - 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	25.8	28.2	139.8	272.3	287.3
Return on Average RAB@14%	3.6	4.0	19.6	38.1	40.2
Operating Expenditure	23.6	26.4	26.1	32.1	32.9
Depreciation	1.7	1.8	6.3	14.0	14.0
Corporate Tax	4.0	5.7	0.0	0.0	0.0
Less- Revenue from services other than Regulated services	22.1	27.2	22.9	19.9	24.4
ARR as per Authority	10.9	10.7	29.2	64.2	62.7
Total ARR as per Authority	177.7				
Discounted ARR	10.9	9.4	22.4	43.4	37.1
PV of ARR for the control Period as on 01.04.2012	123.2				

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

Table 15 - ARR, yield and shortfall 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 14)	10.9	10.7	29.2	64.2	62.7	
2	Aeronautical Revenue	18.1	20.7	25.0	28.9	35.0	
3	Shortfall	-7.2	-10.0	4.2	35.3	27.7	
4	Future Value of shortfall as on 01.04.2016	-13.9	-16.9	6.2	45.9	31.6	53.0

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.
 - 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 31.

1.e. The Authority proposes to consider short fall of ₹ 53 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 16 - Traffic Growth rates assumed by AAI for the 2nd control period

YEAR	Passenger			ATM		
	Domestic	International	Combined	Domestic	International	Combined
2016-17	20.0%	6.0%	18.3%	18.0%	5.0%	17.0%
2017-18	12.0%	5.0%	11.2%	10.0%	4.0%	9.0%
2018-19	12.0%	5.0%	11.3%	10.0%	4.0%	9.0%
2019-20	12.0%	5.0%	11.3%	10.0%	4.0%	9.0%
2020-21	12.0%	5.0%	11.4%	10.0%	4.0%	9.0%

5.2. AAI submitted that traffic growth rate for FY 2016-17 is based on the actual traffic during FY 2016-17.

Authority's Examination

5.3. The Authority observed that the actual traffic data is available for FY 2016-17 for civil enclave Goa. 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 18.

5.4. 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 civil enclave Goa. The details have been provided in table below:

Table 17 - CAGR for Traffic at Civil enclave Goa

	Growth rates as per AAI (FY18 to FY21)	10 Year CAGR (FY06 to FY16)	5 Year CAGR (FY11 to FY16)
Passenger			
Domestic	12.0%	14%	13.6%
International	5.0%	5%	2.3%
ATM			

	Growth rates as per AAI (FY18 to FY21)	10 Year CAGR (FY06 to FY16)	5 Year CAGR (FY11 to FY16)
Passenger			
Domestic	10.0%	10%	11.6%
International	4.0%	5%	1.9%

5.1. 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. Hence, the Authority proposes to adopt growth rates for passenger and ATM traffic from FY 2017-18 to FY 2020-21 based on 10 years CAGR.

Table 18 - Traffic growth rates and traffic as considered by Authority for the 2nd control period

Year	Passenger			ATM		
	Domestic	International	Combined	Domestic	International	Combined
Growth Rates						
2016-17	27.9%	24.6%	27.5%	23.4%	15.1%	22.5%
2017-18	14%	5%	13.0%	10%	5%	9.8%
2018-19	14%	5%	13.1%	10%	5%	9.8%
2019-20	14%	5%	13.1%	10%	5%	9.8%
2020-21	14%	5%	13.2%	10%	5%	9.8%
Traffic						
2016-17	6,051,602	804,760	6,856,362	42,701	5,094	47,796
2017-18	6,903,138	843,247	7,746,385	47,120	5,347	52,467
2018-19	7,874,495	883,575	8,758,070	51,996	5,612	57,608
2019-20	8,982,535	925,832	9,908,367	57,376	5,890	63,266
2020-21	10,246,489	970,109	11,216,599	63,313	6,182	69,495

5.2. 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 18.

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 a 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 and common components. Common components have been further segregated into aeronautical and non-aeronautical assets by applying one of the following ratios:

- a) Terminal Area Ratio - ratio of aeronautical area to non-aeronautical area (applied for Terminal related assets)
- b) Employee Ratio - ratio of staff providing commercial services (2 employees) to staff providing aeronautical services (77 employees)
- c) Vehicle Ratio – ratio of vehicles used for commercial purposes (1 vehicle) to total number of vehicles at airport (9 vehicles)

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 19 – 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	0.32	0.32	100.0%
2	Runways, Taxiways, Aprons – Freehold	21.92	21.92	100.0%
3	Road, Bridges & Culverts	1.70	1.72	99.2%
4	Terminal and Other Buildings	249.62	262.14	95.2%
5	Building Temporary	0.11	0.11	100.0%
6	Building – Residential	0.60	0.60	100.0%
7	Security Fencing - Temporary	0.20	0.20	100.0%
8	Other Buildings - Unclassified	0.00	2.50	0.03%
9	Computers & IT Hardware & Accessories	0.77	0.77	99.9%
10	Intangible Assets - Computer Software	0.04	0.04	100.0%
11	Plant & Equipment - Freehold	28.12	28.13	100.0%

Sr. No.	Assets	Aero Assets (₹ crore)	Total Assets (₹ crore)	% Aero
12	Tools & Equipments	0.96	0.96	100.0%
13	Office Furniture & Fixtures	3.30	3.30	100.0%
14	Vehicles – Freehold	0.78	0.79	98.9%
15	Electrical Installations	29.64	29.65	99.97%
16	Office Appliances - Freehold	0.66	0.67	98.0%
17	Furniture & Fixtures – Freehold – Operational Area	2.92	2.92	100.0%
18	X-Ray Baggage Inspection System	5.89	5.89	100.0%
19	C.F.T./ Fire Fighting Equipment	0.05	0.05	100.0%
	Total	347.59	362.66	95.8%

Authority's Examination

Allocation based on Terminal Area Ratio

6.4. AAI submitted the workings for the calculation of aeronautical area to non-aeronautical area ratio vide letter dated 01.03.2017.

Table 20 – Workings of Terminal Area Ratio calculation as submitted by AAI for FY 2015-16

S.No.	Category	Domestic Terminal /International Terminal (Sq.m)
1	Restaurant / Snack Bars	428.1
2	T.R. Stall	407.2
3	Duty Free Shop	115.5
4	Hoarding & Display	0.0
5	Building Non-Residential	1,492.7
6	Admission Tickets	4.5
7	Offices of AAI comml., land & rest room	0.0
8	Additional Commercial Area earmarked by CHQ for Retail	221.0
9	Additional Commercial Area earmarked by CHQ for F& B	790.0
	Total Non-aeronautical area	3,459.0
	Total Terminal area	64,781.0
	TB Ratio	5.34%

6.5. The Authority observed that the percentage of non-aeronautical area is lower compared to similar airports. The Authority proposes to use 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 Electrical Installations 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. The Authority noted that hangars charges have been considered as non-aeronautical revenues and hangar assets have been excluded from Regulatory Asset Base.

6.8. Further, AAI vide their submission dated 17.05.2017 submitted that ₹ 0.7 cr. of the Plant & Equipment – Freehold assets has been considered as ANS assets instead of airport assets as per their earlier submissions.

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

Table 21 – Change in allocation of gross block of assets existing as on 01.04.2016 between aeronautical and non-aeronautical services proposed by the Authority

Sr. No.	Particulars	Aero Assets	Justification
1	Road, Bridges & Culverts	99.2%	Total assets are ₹ 1.71 crores out of which ₹ 1.70 crores are purely aeronautical assets. Car park related assets of 0.01 crores have been considered as non-aeronautical assets.
2	Terminal and Other Buildings	93.3%	Total assets are ₹ 262.1 crores out of which ₹ 29.1 crores are purely aeronautical assets, ₹ 0.1 crores are purely non-aeronautical assets and ₹ 232.9 crores are common assets. Common assets have been allocated based on 92.5% ratio as aeronautical assets.
3	Building - Temporary	97.9%	Total assets are ₹ 0.15 crores out of which ₹ 0.11 crores are purely aeronautical assets and ₹ 0.04 crores are common assets. Common assets have been allocated based on 92.5% ratio as aeronautical assets.
4	Other Buildings - Unclassified	0.0%	Total assets of ₹ 2.5 crores are cargo related assets and have been excluded from the RAB.
5	Computer and IT Hardware and Accessories	99.8%	Total assets are ₹ 0.77 crores out of which ₹ 0.75 crores are purely aeronautical assets and ₹ 0.02 crores are common assets. Common assets have been allocated based on 92.5% ratio as aeronautical assets.
6	Vehicles - Freehold	98.9%	Total assets are ₹ 0.79 crores out of which ₹ 0.71 crores are purely aeronautical assets and ₹ 0.08 crores are common assets. Common assets

Sr. No.	Particulars	Aero Assets	Justification
			have been allocated based on 92.5% ratio as aeronautical assets.
7	Electrical Installation	99.9%	Total assets are ₹ 29.65 crores out of which ₹ 29.13 crores are purely aeronautical assets and ₹ 0.52 crores are common assets. Common assets have been allocated based on terminal building ratio and employee ratio.
8	Office Appliances-Freehold	97.3%	Total assets are ₹ 0.67 crores out of which ₹ 0.39 crores are purely aeronautical assets and ₹ 0.28 crores are common assets. Common assets have been allocated based on terminal building ratio and employee ratio.

6.10. 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:

Table 22 – 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	Aero Assets (₹ crore)	Total Assets (₹ crore)	% Aero
1	Land	0.0	0.0	-
2	Runways, Taxiways, Aprons-Freehold	21.9	21.9	100.0%
3	Roads, Bridges and Culverts	1.7	1.7	99.2%
4	Terminal and Other Buildings	244.5	262.1	93.3%
5	Building – Temporary	0.2	0.2	97.9%
6	Building – Residential	0.6	0.6	100.0%
7	Security Fencing - Temporary	0.2	0.2	100.0%
8	Other Buildings - Unclassified	0.0	2.5	0.0%
9	Computer and IT Hardware and Accessories	0.8	0.8	99.8%
10	Intangible Assets - Computer Software	0.0	0.0	100.0%
11	Plant & Equipment-Freehold	27.4	27.4	100.0%
12	Tools and Equipments	1.0	1.0	100.0%
13	Office Furniture and Fixtures	3.3	3.3	100.0%
14	Vehicles-Freehold	0.8	0.8	98.9%
15	Electrical Installation	29.6	29.7	99.9%
16	Office Appliances-Freehold	0.7	0.7	97.3%
17	Furniture & Fixtures-Freehold-Operational Area	2.9	2.9	100.0%
18	X-Ray Baggage Inspection System	5.9	5.9	100.0%
19	CFT/ Fire Fighting Equipments	0.0	0.0	100.0%

Sr. No.	Assets	Aero Assets (₹ crore)	Total Assets (₹ crore)	% Aero
	Total	341.5	361.7	94.4%

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 22.

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 01.03.2017 is ₹ 216.1 crore

Table 23 - 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 CNS/ATM related assets as on 01.04.2011	67.2
2	Aeronautical asset addition during the 1 st control period	280.3
3	Cost of Aeronautical Assets [(1)+(2)] as on 01.04.2016	347.6
4	Accumulated Depreciation as on 01.04.2016	131.5
5	Opening RAB[(3)-(4)] as on 01.04.2016	216.1

7.2. The Authority proposes to adopt depreciation rates as detailed earlier in para 4.7 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 22.

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 ₹ 263.0 crore.

Table 24 - 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 CNS/ATM related assets as on 01.04.2011	66.2
2	Aeronautical asset addition during the 1 st control period	275.4
3	Cost of Aeronautical Assets [(1)+(2)] as on 01.04.2016	341.5
4	Accumulated Depreciation as on 01.04.2016	78.5
5	Opening RAB[(3)-(4)] as on 01.04.2016	263.0

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 ₹ 263.0 crore

8. Capital Expenditure for Second control period

8.1. AAI has forecasted aeronautical capital expenditure of ₹ 174.9 crore as per their submission dated 01.03.2017 for the 2nd control period as shown below:

Table 25 – Aeronautical assets to be capitalized at civil enclave Goa for 2nd control period as per AAI

S.N.	Particulars (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
1	Runways, Taxiways, Aprons-Freehold	0.0	0.0	0.0	0.0	103.7
2	Terminal and Other Buildings	22.0	1.4	0.0	0.0	0.0
3	Building Residential	0.0	26.8	0.0	0.0	0.0
4	Security Fencing – Temporary	0.0	1.0	0.0	0.0	0.0
5	Tools and Equipments	0.0	0.0	0.0	0.0	0.0
6	Electrical Installations	19.7	0.3	0.0	0.0	0.0
7	CFT/ Fire Fighting Equipments	0.0	0.1	0.0	0.0	0.0
	Total (₹ 174.9 cr.)	41.7	29.5	0.0	0.0	103.7
	Revised capex as submitted by AAI on 17.05.2017, 05.06.2017, 08.07.2017 and 18.07.2017					
1	Runways, Taxiways, Aprons-Freehold	0.0	0.0	0.0	0.0	111.7
2	Terminal and Other Buildings	0.7	21.2	0.0	0.0	94.7
3	Building Residential	0.0	26.8	0.0	0.0	0.0
4	Security Fencing – Temporary	0.0	1.0	0.0	0.0	0.0
5	Tools and Equipments	1.1	0.0	0.0	0.0	0.0
6	Electrical Installations	0.5	18.1	0.0	0.0	100.0
7	CFT/ Fire Fighting Equipments	0.0	0.1	0.0	0.0	0.0
	Total (₹ 375.8 cr.)	2.3	67.1	0.0	0.0	306.4

8.2. AAI has submitted following details of the proposed capital works to be undertaken during the control period:

8.2.1. Expansion of Existing Integrated Passenger Terminal Building on Eastern Side

Construction of 18,300 sq. m. of centrally air-conditioned as extension of existing Integrated Terminal Building with all modern facilities and amenities. The extension is designed such that after construction the extended Terminal building (62000+18300=80300 sq. m.) shall be capable of handling at least 3,450 (2700 Domestic + 750 International) passengers during peak hour.

The extension building shall have 1 no. islands of 32 check in counters each to have total 96 check in counters in the total building along with toilets, baggage,

conveyor belts, queuing space, segregation railing, back-up offices for Airlines, facilitation counters, weighing machines, counters, automated baggage drop system, etc.

The extension building shall have a full row of domestic security check counters along with toilets and offices. It shall also cater for Domestic security Hold with 3 nos. additional Exit gates to PBB with F&B and retail outlets. Escalators, staircase and lift connectivity between Domestic SHA on First floor in extended portion and relocated Domestic SHA on Second floor is also proposed.

The existing domestic and international passenger movement within the terminal is proposed to be interchanged at first and second floors so that the SHA with the existing building on eastern side becomes Domestic SHA. The extension building shall have Domestic security hold and F&B and retail outlets in continuation to the existing security hold area and connecting with the proposed domestic security hold on the first floor with a series of escalators and stairs.

The old Terminal Building which was to be partially demolished for construction of Parallel Taxi track shall be totally demolished including its approach ramps, for construction of the extension of Integrated Terminal Building and Apron.

8.2.2. Expansion of Existing Apron

Expansion of existing Apron to the eastern side having an area of 9170 sq. m. to accommodate 3 nos AB-321/ B-737 type of aircrafts in power-in push out configuration space for Ground Support Equipments. Slopes on an apron, including those on an aircraft stand taxi lane, shall be sufficient to prevent accumulation of water on the surface of the apron but shall be kept as level as drainage requirements permit. Demolition of exiting shoulder 1863 sq. m. in area and construction of pavement of apron strength. The Apron should have strength to cater to the operation of AB 747-400 type of aircraft. Provision of fillets at intersection with Parallel Taxi track for AB-747-400 aircraft.

Provision of apron edge lights and mandatory instruction signs and other illuminated information signs. Augmentation of power supply, if any. Provision

of apron flood lights for the extended portions of the apron to meet the required illumination standards as per DGCA (CAR) and Aerodrome Design Manual Part-IV (Visual Aids). Rerouting of any electrical or communication cables in the areas of proposed extension of apron.

8.2.3. Construction of Parallel Taxi Track

The existing Civil Enclave is almost at one end of the runway 08/26 on the northern side. Due to the absence of Parallel Taxi Track on the northern side of Runway 08/26, landed aircraft has to back track on the whole length of runway to reach Civil Apron using the link Taxi ways N1/N2, N4, N5 or using curtailed Parallel Taxi Track on the southern side involving crossing of runway. This process limits the runway capacity of handling aircrafts.

In order to reduce the runway occupancy time by Civil Flights, a full length parallel taxi track suitable for B-747 type of aircrafts is proposed on the northern side on Runway 08/26. AAI and Indian Navy have agreed in Principle to share the cost of Construction on 50:50 basis. The terms and conditions of the MOU are being finalized for signing with Indian Navy.

8.2.4. Extension of West Side Finger for NITB

The Integrated Terminal Building having an area of 62000sqm and having 5 Nos. aerobridges for "C" Category aircrafts is capable of handling 2750 peak hour passengers (2000 Domestic and 750 International) at a time. Due to increase of International chartered aircraft movements within a limited time, need was felt to provide additional in-contact facilities on the existing apron for 'E' category aircrafts by extending airside corridor at three levels on the western side towards IOC dump. The work for extension of west side finger with rotunda for 3 Nos. aerobridge has been awarded to M/s M. Venkata Rao Infra Project Pvt. Ltd at a cost of ₹ 38.76 crores.

8.2.5. Construction of Residential Quarters at Goa

Goa Airport being a civil enclave does not have enough land within airport boundary for construction of staff quarters. Therefore State Govt. has handed over about 5 acres of land to AAI at Chicalim for residential quarters.

Subsequently AAI had proposed construction of 45 Nos. Quarters + 24 transit accommodation (20 Nos. -B type, 20 Nos.- C type, 5 Nos. - D Type, 8 Nos. Double room Transit quarters, 16 Nos. single room transit quarters and a Community centre). The work of construction of residential quarters has been awarded to M/s CMM Infrastructure Limited, Indore. AA/ ES for the above mentioned work is ₹ 29.60 Cr.

Authority's Examination

- 8.3. The Authority requested AAI to submit the Capex to be incurred in FY 2016-17 based on current status. In response to this, AAI vide their submission dated 17.05.2017, 05.06.2017, 08.07.2017 and 18.07.2017 provided the revised capital expenditure to be incurred in the 2nd control period. AAI vide their submission dated 08.07.2017 submitted that the revised capital expenditure for extension of Terminal Building and Apron to be capitalized in FY 2020-21 is ₹ 200 cr. and ₹ 8 cr.
- 8.4. The Authority notes that there is no clarity on the traffic demand after this control period due to commissioning of greenfield airport at Mopa, Goa. Further, the Authority noted that the capital expenditure for expansion of integrated terminal building (₹ 200 cr.) and apron (₹ 8 cr.) to be capitalized in FY 2020-21 is tentative and hence proposes to exclude the same for the tariff determination in the 2nd control period. In case, AAI incurs the capital expenditure towards the expansion of terminal building and capitalizes the same during the 2nd control period, it will be trued up while determining tariff for 3rd control period. In case the expenditure is incurred during the 2nd control period and AAI feels that this will lead to significant increase in tariff, it may propose revision of tariffs after capitalization of the terminal building and apron.
- 8.5. The Authority noted that the total capital expenditure for Construction of Residential Quarters (₹ 29.60 crore) has been allocated into aeronautical assets using the ratio of airport staff (85) to total staff (94). The Authority proposes to consider the aeronautical capital expenditure for construction of residential quarters (₹ 26.8 crore) as provided by AAI.
- 8.6. The Authority has issued an order on Normative Approach to Building Blocks in

Economic Regulations of major airports. In this regard, AAI submitted that the following details:

Table 26 – Details of cost per unit area of Terminal Building and Taxi way as per AAI for the capital expenditure in 2nd control period

Sr. No.	Asset	Capitalizati on year	Cost (₹ cr.)	Area (sq. m.)	Cost per unit area (₹ per sq. m.)
1	Construction of Terminal Building (Extension of Western Side fingers)	FY 2017-18	35.5	4,677	75,903
2	Construction of Parallel Taxi Track	FY 2020-21	103.7	160,000	6,482

8.7. The Authority observed that the cost of terminal for extension of western side fingers per square meter of terminal area is greater than the threshold limits of normative cost as per Authority's guideline/ order. The Authority had requested AAI to provide justification for such higher cost per unit area. AAI vide their response dated 18.07.2017 provided that the total plinth area of extension of west side finger at Goa is around 4,677 sq. m and probable completion cost of the project is ₹ 35.5 Crores (final bill under process). Hence cost per unit area works out to ₹ 75,903. The cost includes cost of superior finishing like standing seam roof with insulation aluminium roofing system. Glass facade, expensive architectural toughened glass, stainless steel casing on columns, etc. which makes AAI Airports comparable to world class airport. Hence, cost per unit area cost of ₹ 75,903 is commensurate with elegance and facility provided.

8.8. The Authority observed that the cost of parallel taxi track per square meter of parallel taxi track is greater than the threshold limits of normative cost as per Authority's guideline/ order. The Authority had requested AAI to provide justification for such higher cost per unit area. AAI vide their response dated 18.07.2017 provided that cost of PTT works out to ₹ 103.7 crores excluding earthwork cost up to subgrade level i.e. ₹ 6,420/- per sq. m. Considering the soil condition, the proposed section for parallel taxi track consists of sand/ moorum filling, west mix macadam, dry rolled lean concrete and finally pavement quality concrete as the top layer. The per unit area rate of PTT for the above section as per CPWD – DSR-2016 + CI works out to be ₹ 6,000. The above work rate of ₹ 6,000 does not include the cost of associated works such as drainage system,

RCC culvert, boundary wall including internal road, electrical works, earth filling of around 9,00,000 etc. In view of above, the unit rate per SQM for parallel taxi work seems to be reasonable.

8.9. The Authority has noted the above justification by AAI for cost exceeding the normative benchmarks. However, the Authority is of the view that the capital expenditure of the planned works is indicative and actual capital expenditure may be different. Hence, the Authority proposes to revise the capital expenditure for terminal building and PTT based on normative benchmarks for FY 2015-16 and increase the benchmarks by WPI of 4.2% per annum till the year of capitalization.

8.10. The total capital expenditure for these assets as proposed by the Authority has been provided in the table below:

Table 27 – Capital expenditure for terminal building, apron and PTT as proposed by the Authority

Sr. No.	Asset	Capitalization year	Area (sq. m.)	Inflation adjusted normative benchmark cost per unit area (₹ per sq. m.)	Allowed Capex (₹ cr.)
1	Construction of Terminal Building (Extension of Western Side fingers)	2018	4,677	70,575	33.0
2	Construction of PTT (shared between AAI and Indian Navy)	2021	160000	5,773	92.4

8.11. The Authority further noted that the total capital expenditure for construction of terminal building (revised to ₹ 16.5 crore) and other terminal related expenditure (revised to ₹ 2.6 crore) capitalized in FY 2017-18 has been allocated into aeronautical assets using the terminal building ratio of 94.66%. The Authority proposes to consider 92.5% as aeronautical assets for construction of terminal building (₹ 15.3 crore) and other terminal related expenditure (₹ 2.4 crore) in FY 2017-18. Additionally, capex for construction of administrative block (₹ 1.9 crore) which is capitalized in FY 2017-18 has been considered as aeronautical capex.

8.12. The Authority further noted that total capital expenditure for electrical installations in the terminal buildings which has been capitalized in FY 2017-18 (revised to ₹ 16.5 crore)

has been considered by AAI as aeronautical capex vide their submission dated 17.05.2017. Further, AAI vide their submission dated 05.06.2017 submitted that 20% of capital expenditure for electrical installations may be considered for allocation into aeronautical and non-aeronautical assets using terminal building ratio and remaining 80% should be considered as 100% aeronautical capex. The Authority proposes to allocate 92.5% of the capital expenditure for electrical installations which has been capitalized in FY 2017-18 as aeronautical Capex.

8.13. The Authority noted from the list of works provided by AAI that the cost of construction of Parallel Taxi Track (PTT) including other works such as strengthening of taxiways, development of fillets of taxiways, construction of perimeter road around dumbbell, etc. is ₹ 183.3 cr. AAI in their submissions dated 18.07.2017 submitted that the cost of PTT including other works has been revised to ₹ 187.9 cr. The Authority proportionally increased the components of the parallel taxi track which have been provided in table below:

Table 28 – Details of cost for construction of PTT and other works

Sr. No.	Asset	Cost (₹ cr.)
1	Construction of PTT shared between AAI and Indian Navy	122.9
2	Capex of Other Works (includes strengthening of taxiways, development of fillets of taxiways, construction of perimeter road around dumbbell, etc.)	65.0
2(i)	Capex under other works undertaken by AAI only	26.2
2(ii)	Capex under other works undertaken by Indian Navy only	3.6
2(iii)	Capex under other works shared between AAI and Indian Navy	35.2
3	Total Capex	187.9

8.14. The Authority proposes to revise the capital expenditure for construction of parallel taxi track based on normative benchmarks for FY 2015-16 and increase the benchmarks by WPI of 4.2% per annum till the year of capitalization. Accordingly, the Authority proposes to consider the cost of PTT to be ₹ 92.4 cr. which will be shared between AAI and Indian Navy. The Authority proposes to consider ₹ 90.0 cr. for the capital expenditure for PTT and other works which will be borne by AAI as per the table below:

Table 29 – Capital Expenditure for PTT and other works to be borne by AAI and Indian Navy as proposed by the Authority

Sr. No.	Asset (in ₹ cr.)	Cost	Cost borne by AAI	Cost borne by Indian Navy
1	Construction of PTT shared between AAI and Indian Navy	92.4	46.2	46.2
2	Capex of Other Works (includes strengthening of taxiways, development of fillets of taxiways, construction of perimeter road around dumbbell, etc.)	65.0		
2(i)	Capex under other works undertaken by AAI only	26.2	26.2	0
2(ii)	Capex under other works undertaken by Indian Navy only	3.6	0	3.6
2(iii)	Capex under other works shared between AAI and Indian Navy	35.2	17.6	17.6
3	Total Capex	157.3	90.0	67.4

8.15. The Authority also proposes to undertake a study by technical experts to estimate the allowable terminal and parallel taxi track capital expenditure for civil enclave Goa vis-à-vis normative benchmarks. The Authority had asked AAI for detailed information on justification for exceeding the normative benchmarks. Due to lack of adequate 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 shall undertake a study on reasonableness of capital expenditure 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 true-up the capital expenditure for construction of Terminal Building (Extension of Western Side fingers) and construction of parallel taxi track at the time of tariff determination for 3rd control period.

8.16. The other capital expenditure details have been updated based on capital expenditure status provided by AAI vide their submission dated 17.05.2017, 05.06.2017, 08.07.2017 and 18.07.2017.

Table 30 - 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, Aprons-Freehold	0.0	0.0	0.0	0.0	90.0

S.N.	Particulars (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
2	Terminal and Other Buildings	0.7	19.6	0.0	0.0	0.0
3	Building Residential	0.0	26.8	0.0	0.0	0.0
4	Security Fencing – Temporary	0.0	1.0	0.0	0.0	0.0
5	Tools and Equipments	1.1	0.0	0.0	0.0	0.0
6	Electrical Installations	0.5	15.5	0.0	0.0	0.0
7	CFT/ Fire Fighting Equipments	0.0	0.1	0.0	0.0	0.0
	Total	2.3	63.0	0.0	0.0	90.0

8.17. The Authority proposes to consider the total aeronautical Capex to be capitalized and added to RAB at ₹ 155.3 crore.

8.18. 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 30 subject to true-up of RAB based on actual aeronautical asset addition, outcome of the study and the actual costs as per the tender mentioned in para 8.15 while determining tariffs for the 3rd control period.

8.19. In the 2nd control period, project works related to Construction of Parallel Taxi Track, Extension of West Side Finger at NITB inclusive of electrical installations and Construction of Residential Quarters 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. AAI has submitted vide their response dated 18.07.2017 the User Consultation for construction of parallel taxi track.

Proposal No. 5. Capital Expenditure

5.a. The Authority proposes to consider allowable project cost of ₹ 155.3 crore and accordingly to reckon the amount of ₹ 155.3 crore as addition for total assets during the 2nd control period.

5.b. AAI should undertake user stakeholder consultation process for major Capex items as per the Guidelines.

5.c. The Authority proposes to true-up the Opening RAB of the next control period depending on the Capex 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. In this regard, the Authority has separately commissioned a study to determine appropriate depreciation rates for regulation of airports in line with the provisions of the Companies Act 2013. The Authority proposes to consider the recommendations of the study on depreciation and finalize the depreciation rates in consultation with the stakeholders. It shall make necessary adjustments in RAB and true-up of depreciation while considering tariff determination in future.

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 31 - 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	0.00%	0.00%	0.00%
2	Runways, Taxiways, Aprons - Freehold	13.00%	3.33%	3.33%
3	Road, Bridges & Culverts	13.00%	1.63%	3.33%
4	Terminal and Other Buildings	8.00%	1.63%	3.33%
5	Building Temporary	100.00%	100.00%	33.33%
6	Building – Residential	5.00%	1.63%	3.33%
7	Security Fencing - Temporary	100.00%	100.00%	33.33%
8	Other Buildings – Unclassified	8.00%	1.63%	3.33%
9	Computers & IT Hardware & Accessories	20.00%	16.21%	16.67%
10	Intangible Assets - Computer Software	20.00%	20.00%	20.00%
11	Plant & Equipment - Freehold	11.00%	4.75%	6.67%
12	Tools & Equipments	20.00%	4.75%	6.67%
13	Office Furniture & Fixtures	20.00%	6.33%	10.00%
14	Vehicles – Freehold	14.00%	9.50%	12.50%
15	Electrical Installations	11.00%	4.75%	10.00%
16	Office Appliances - Freehold	18.00%	4.75%	20.00%
17	Furniture & Fixtures – Freehold – Operational Area	20.00%	6.33%	10.00%
18	X-Ray Baggage Inspection System	11.00%	4.75%	6.67%

No.	Asset Class	As per AAI	As per Authority till FY 2014	As per Authority FY2015 onwards
19	C.F.T./ Fire Fighting Equipment	13.00%	4.75%	6.67%

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

Table 32 - 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	30.4	31.1	29.3	28.9	42.1	161.7
2	As per Authority	13.3	15.0	16.5	16.2	17.3	78.4

Proposal No. 6. Treatment of Depreciation

6.a. The Authority proposes to adopt depreciation rates as per Table 31 and depreciation for the 2nd control period as per Table 32.

6.b. The Authority proposes to consider the recommendations of the study on depreciation and finalize the depreciation rates in consultation with the stakeholders. It shall make necessary adjustments in RAB and true up of depreciation while considering tariff determination in future.

10. RAB for Second control period

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

Table 33 - Summary of the RAB and Depreciation for civil enclave Goa (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	216.06	227.3	225.8	196.5	167.6
B	Aeronautical Additional Assets capitalized during the year	41.7	29.5	0.0	0.0	103.7
C	Disposals/Transfers	0.0	0.0	0.0	0.0	0.0
D	Depreciation	30.4	31.1	29.3	28.9	42.1
E	Closing Aeronautical RAB (A+B-C-D)	227.3	225.8	196.5	167.6	229.3
	Average RAB (A+E)/2	221.7	226.5	211.1	182.1	198.4

Authority's Examination

10.2. The Authority proposes to adopt opening RAB for FY 2016-17 as detailed in Table 24.

10.3. The Authority proposes to adopt depreciation as proposed in Table 32.

10.4. The Authority proposes ₹ 155.3 crore as the addition of aeronautical assets to RAB as detailed in Table 30.

10.5. The revised Regulatory Asset Base as calculated by the Authority for 2nd control period under hybrid till is as follows:

Table 34 - Summary of forecast and Roll forward RAB and Depreciation for civil enclave Goa (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	263.0	252.0	300.0	283.5	267.2
B	Aeronautical Assets capitalized during the year	2.3	63.0	0.0	0.0	90.0
C	Disposals/Transfers	0.0	0.0	0.0	0.0	0.0
D	Depreciation	13.3	15.0	16.5	16.2	17.3
E	Closing Aeronautical RAB (A+B-C-D)	252.0	300.0	283.5	267.2	339.9
	Average RAB (A+E)/2	257.5	276.0	291.7	275.3	303.5

10.6. 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 34

7.b. The Authority proposes to true up the RAB of 2nd control period based on actual asset addition and revised depreciation rates based on the outcome of the study commissioned by the Authority, 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 not apportioned any debt for civil enclave Goa and financing activities are undertaken centrally at the corporate office of AAI. Due to lack of any debt on civil enclave at Goa's books, FRoR is determined based on capital structure of AAI as a whole.

Authority's Examination

11.3. 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.

11.4. 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 Chennai and Kolkata airport in the 1st control period considering the recommendations of another study done by NIPFP. Based on the decision for Chennai and Kolkata airport, the Authority considered FRoR at 14% for Guwahati and Lucknow airport for 1st control period.

11.5. Based on the above, the Authority proposes to consider FRoR at the rate of 14% for civil enclave at Goa 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 civil enclave at Goa 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 35 - 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
	Trading Concessions						
1	Restaurants/Snack Bar	3.4	3.9	4.5	5.1	5.8	6.6
2	TR Stall/others	2.1	2.4	2.8	3.1	3.6	4.1
3	Hoardings & Displays	4.0	4.5	5.2	5.9	6.7	7.6
	Rent and Services						
4	Buildings (Residential)	0.0	0.0	0.0	0.0	0.0	0.0
5	Buildings (Non-Residential)	3.8	4.2	4.6	5.1	5.6	6.2
	Miscellaneous						
6	Duty Free Shops	3.5	8.2	9.1	10.0	11.0	12.1
7	Car Rentals	0.0	0.0	0.2	0.2	0.3	0.3
8	Car Parking	2.8	3.1	2.5	2.7	3.0	3.3
9	Admission Tickets	0.5	0.5	0.6	0.6	0.7	0.7
10	Other Miscellaneous Income	4.8	5.0	5.3	5.6	5.8	6.1
11	Sale of Scrap/ Fixed Asset	0.1	0.0	0.0	0.0	0.0	0.0
	Total	25.0	32.0	34.6	38.3	42.4	47.0

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

Table 36 – 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	Restaurants/Snack Bar	14%	14%	14%	14%	14%
2	TR Stall/others	14%	14%	14%	14%	14%
3	Hoardings & Displays	14%	14%	14%	14%	14%
4	Buildings (Residential)	7.5%	7.5%	7.5%	7.5%	7.5%
5	Buildings (Non-Residential)	10%	10%	10%	10%	10%
6	Duty Free Shops	135%	10%	10%	10%	10%
7	Car Rentals	-	-	14%	14%	14%
8	Car Parking	10%	-21%	10%	10%	10%
9	Admission Tickets	10%	10%	10%	10%	10%
10	Other Miscellaneous Income	5%	5%	5%	5%	5%

12.3. AAI has provided in their submissions dated 01.03.2017 that civil enclave at Goa would start generating revenues from car rentals from FY 2017-18 because car rental contract

is expected to be restored in FY 2017-18. AAI further stated that there is sudden increase in Duty Free shop revenues in FY 2016-17 because the revised Duty Free shop contract has been effected in FY 2016-17. AAI submitted that the decrease in the revenues from car parking in FY2017-18 is because the car parking area would be partly used for parallel taxi track from FY 2017-18 onwards.

Authority's Examination

- 12.4. The Authority noted that as part of clarifications provided dated 17.05.2017, AAI has revised the growth rates to 10% (from 14% as submitted earlier) for revenues from Restaurants/ Snack Bar, T. R. Stalls/ other, Hoardings & Display and Car Rentals. AAI has proposed these growth rates based on the contractual agreements. AAI further stated that the Terminal Building will come up in 2nd half of FY 2020-21, hence, the impact of additional terminal area on non-aeronautical revenues would take effect in 3rd control period. Hence, non-aeronautical revenue has been increased in the FY 2020-21 as per contractual agreements.
- 12.5. The Authority proposes to consider the revised growth rates as submitted by AAI dated 17.05.2017 for the determination of tariff for the 2nd control period as they are as per the contracts/ agreements signed or projected as per the contracts/ agreements to be signed in future with the service providers.
- 12.6. The Authority requested AAI to provide justification for the forecasted growth rate of 5% assumed for Other Miscellaneous income. AAI vide their submissions dated 17.05.2017 clarified that 5% growth rate is based on the past trend in the Other Miscellaneous income. The Authority proposes to revise the growth rate of Other Miscellaneous income to 8% based on the past 5-year (FY11-FY16) CAGR.
- 12.7. The Authority observed that civil enclave at Goa has accrued 1.41 lakhs in FY 2015-16 from revenue share from cargo service provider as per the Trial Balance for FY 2015-16. AAI vide its submission dated 05.06.2017 clarified that this revenue pertains to X-ray screening charges instead of revenue share from cargo service provider. As X-ray screening is an aeronautical service, the Authority proposes to deduct this revenue from non-aeronautical revenues.

12.8. 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

12.9. AAI has allotted following space to ground handling for their operations. AAI has considered income from such Building rent as non-aeronautical revenues

Table 37 – Details of land allotted to ground handling in 2nd control period

Service	Service Provider	Space Allocated (Sq.m)	Building Non-Residential revenues (FY 2015-16) ₹ crore
Ground Handling	J.P. Aviation Sys Pvt Ltd	9.75	0.00 (₹ 47,467)
Ground Handling	Nas Aviation Sys Pvt Ltd	769.15	0.26
Ground Handling	Janus Aviation Pvt Ltd	280.5	0.07
Ground Handling	Globe Ground India Pvt Ltd	250.32	0.12
Ground Handling	IFOS Aviation Sys Pvt Ltd	14.25	0.03
Ground Handling	Freedom Holidays Pvt Ltd	13.44	0.03
Ground Handling	Minar Travels	11.5	0.03
Ground Handling	Cicerone Air Transport Sys	28.45	0.03
Ground Handling	Aircon Air Spares	12.45	0.01
Ground Handling	Jet Concept Pvt Ltd	12.45	0.02

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

12.11. The Authority noted that AAI in their submission dated 01.03.2017 have increased rent revenues from building non-residential for GH agencies by 10% and proposes to accept the same.

12.12. AAI has created a wholly owned subsidiary AAI Cargo Logistics and Allied Services Company Ltd (AAICLAS) in the FY 2016-17 which will take over cargo operations at civil

enclave Goa. The proposal for cargo activities will be filed separately by AAICLAS for determination of cargo tariff in the 2nd control period. As per the clarifications received from AAI dated 08.07.2017, AAI will not receive any revenue from AAICLAS for the 2nd control period for cargo operations. The cargo revenue projection has not been considered in determination of tariff of 2nd control period of civil enclave Goa.

12.13. The Authority proposes to consider building non-residential rent revenues on account of the aeronautical services of ground handling as aeronautical revenue.

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

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

Table 38 – 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)	32.0	34.6	38.3	42.4	47.0
Adjustment:					
Change in revenue from ground handling and cargo considered as aeronautical revenues and change in growth rates (B)	0.9	2.2	2.8	3.5	4.3
Non-Aeronautical Revenues as per Authority (A-B)	31.1	32.4	35.5	38.9	42.7

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 building rent from these activities as aeronautical revenue.

9.b. The Authority proposes to consider the Non Aeronautical Revenue as per Table 38

9.c. 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.

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

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

Table 39 - 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 civil enclave Goa	11.47	14.34	15.63	17.03	18.55
2	Expenditure for civil enclave Goa employees' retirement benefits allocated at CHQ	1.74	2.18	2.29	2.40	2.52
A	Total Pay roll Expenditure (1+2-3)	13.2	16.5	17.9	19.4	21.1
3	Administrative and General Expenditure	2.73	3.00	3.30	3.63	3.99
4	Apportionment of administration & General expenditure of CHQ/RHQ	6.36	6.67	7.01	7.36	7.73
B	Total Administration & General Expenditure(4+5)	9.1	9.7	10.3	11.0	11.7
C	Repairs and Maintenance Expenditure (Total)	4.84	5.32	5.85	6.44	7.08
5	Power Charges	7.26	7.26	7.26	7.26	7.26
6	Water Charges	0.45	0.45	0.45	0.45	0.45
7	Consumption of Stores and Spares	0.05	0.05	0.06	0.07	0.07
D	Utility and Outsourcing Expenditure (6+7)	7.8	7.8	7.8	7.8	7.8
E	Other Outflows	0.30	0.33	0.37	0.41	0.45
	Total (A+B+C+D+E)	35.2	39.6	42.2	45.0	48.1

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

Table 40 – 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%

No.	Particular	2016-17	2017-18	2018-19	2019-20	2020-21
	Fringe benefits including perks & medical expenses	9%	25%	9%	9%	9%
	Overtime	5%	25%	5%	5%	5%
	Allocation of Retirement Benefit provided at CHQ in r/o civil enclave Goa Employees	5%	25%	5%	5%	5%
2	R&M Expenses	10%	10%	10%	10%	10%
3	Utility and outsourcing Expenditure					
	Power & Water charges	0%	0%	0%	0%	0%
	Consumption of Stores and Spares	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					
	Collection charges on PSF	11%	11%	11%	11%	11%

* 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 41 – O&M Expense allocation as submitted by AAI

Sr. No.	Particulars	Aero Expense	Non-Aero Expense
1	Payroll Expenses - Non-CHQ	98%	2%
2	Payroll Retirement benefit expenses Apportionment – CHQ	100%	0%
3	Admin and General Expenses – Non CHQ	97%	3%
4	Admin and General overheads Expenses Apportionment – CHQ/RHQ	63%	37%
5	R&M Expenses	97%	3%
6	Utility and Outsourcing Charges	100%	0%
7	Other Outflows	100%	0%
	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 payroll costs components – Salaries and Wages,

Fringe Benefits, including perks & medical expenditure 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 growth rate of 7% for the above payroll components.

13.6.2. The Authority notes that expenditure on apportionment of retirement benefits provided to CHQ in respect of civil enclave Goa 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 civil enclave Goa employees (as per discussion with AAI).

13.6.3. The Authority has noted that an increase of 25% has been projected in the pay roll expenditure in FY 2017-18 by AAI due to tentative increase in salary and wages on account of wage revision. However, as part of clarifications provided dated 17.05.2017, AAI has revised the growth rate for the payroll expenditure in FY 2017-18 to 40% from earlier 25%. The Authority notes that Public Sector Undertakings are covered under separate wage revision mechanism. Moreover, the Authority is of the view that as on date there is no actual evidence for the said outflow in FY 2017-18 and hence proposes to true up the expenditure in the 3rd control period. In view of above, an increase of 25% is proposed for projection of the pay roll expenditure for FY 2017-18 in line with Trivandrum order for the 2nd control period.

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.

13.6.5. The Authority observed that AAI has allocated 50% of the ANS staff expense under airport payroll costs. AAI vide their submissions dated 17.05.2017

submitted that the staff deputed at Goa Airport (Civil Enclave) for CNS / ATC is also working for airport activities as ATC work is performed by Defence Authorities. Hence, 50% staff related costs of CNS / ATC staff is taken as cost of airport activities. Further, the AAI vide their submissions dated 06.08.2017 submitted that the expenses of the ANS/ CNS employees working exclusively for airport would be booked under airport from the FY 2017-18 onwards. The projection of 50% may continue for 2nd control period and it would be trued up on the basis of actual while finalizing tariff at 3rd control period for Goa Airport. The Authority proposes to consider 50% of the ANS staff cost as the airport payroll costs since these employees have been working in airport activities for the 2nd control period. The Authority proposes to true-up the payroll costs for these CNS/ ATC staff in the 3rd control period based on actuals.

Segregation of aeronautical expenses

13.7. The Authority notes that the Payroll Costs in the operational expenditure have been allocated using percentage of employees for aeronautical services to total employees which is 97%. To account for common service employees handling both aeronautical and non-aeronautical activities, the Authority proposes to use ratio of 95% to 5% for allocation of payroll costs.

13.8. The Authority notes that apportionment of retirement benefits provided in CHQ in respect of civil enclave Goa have been considered as 100% aeronautical expenses. The Authority proposes to use the ratio of 92.5% to 7.5% for aeronautical and non-aeronautical allocation for apportionment of admin CHQ/RHQ expenses. 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 civil enclave Goa.

13.9. 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 - Electronics and Conservancy Charges/ Consumption of spares.

Correction in projection

13.10. The O&M expenditure for FY 2015-16 which includes both aeronautical and non-

aeronautical expense is given in the table below:

Table 42 – Total O&M expenditure for FY 2015-16 as proposed by the Authority

No.	Particulars (₹ crore)	2015-16
1	Pay roll Expenditure of civil enclave Goa	10.8
2	Expenditure for civil enclave Goa employees' retirement benefits allocated at CHQ	1.7
A	Total Pay roll Expenditure (1+2-3)	12.4
3	Administrative and General Expenditure	2.6
4	Apportionment of administration & General expenditure of CHQ/RHQ	5.3
B	Total Administration & General Expenditure(4+5)	7.9
C	Repairs and Maintenance Expenditure (Total)	4.5
5	Power Charges	7.3
6	Water Charges	0.4
7	Consumptions of Stores and Spares	0.1
D	Utility and Outsourcing Expenditure (6+7+8)	7.8
E	Other Outflows	0.3
	Total (A+B+C+D+E)	32.9

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

Table 43 – Expense allocation between aeronautical and non-aeronautical services proposed by the Authority

Sr. No.	Particulars	Aero Expense	Non-Aero Expense
1	Payroll Expenses - Non-CHQ	95%	5%
2	Payroll Retirement benefit expenses Apportionment – CHQ	95%	5%
3	Admin and General Expenses – Non CHQ	94%	6%
4	Admin and General overheads Expenses Apportionment – CHQ/RHQ	92.5%	7.5%
5	R&M Expenses	96%	4%
6	Utility and Outsourcing Charges	100%	0%
7	Other Outflows	100%	0%
	Total	96%	4%

13.12. 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 44 - 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 civil enclave Goa	10.9	13.7	14.6	15.7	16.7
2	Expenditure for civil enclave Goa employees' retirement benefits allocated at CHQ	1.7	1.8	1.9	2.1	2.2
A	Total Pay roll Expenditure (1+2-3)	12.6	15.5	16.6	17.7	19.0
3	Administrative and General Expenditure	2.6	2.9	3.2	3.5	3.9
4	Apportionment of administration & General expenditure of CHQ/RHQ	5.1	5.4	5.7	6.0	6.3
B	Total Administration & General Expenditure(4+5)	7.8	8.3	8.9	9.5	10.1
C	Repairs and Maintenance Expenditure (Total)	4.8	5.3	5.8	6.4	7.0
5	Power Charges	7.3	7.3	7.3	7.3	7.3
6	Water Charges	0.4	0.4	0.4	0.4	0.4
7	Consumption of Stores and Spares	0.0	0.1	0.1	0.1	0.1
D	Utility and Outsourcing Expenditure (6+7)	7.8	7.8	7.8	7.8	7.8
E	Other Outflows	0.3	0.3	0.4	0.4	0.5
	Total (A+B+C+D+E)	33.3	37.2	39.4	41.7	44.3

13.13. 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.

13.14. The Authority noted that O&M expenditure at civil enclave Goa is on higher side and expects AAI to reduce the O&M expenditure.

Proposal No. 10. Operation and Maintenance expenditure

10.a. The Authority proposes to consider the operational and maintenance expenditure as given in Table 44 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 2016-17 to 2020-21 of the 2nd control period based on the actuals at the time of determination of tariffs for the 3rd

control period.

10.d. The Authority proposes the following factors for corrections while determining tariffs for the next control period:

- (i)* Mandated cost incurred due to directions issued by regulatory agencies like DGCA;
- (ii)* Cost of actual operating expenses including electricity;
- (iii)* All statutory levies in the nature of fees, levies, taxes and other such charges by Central or State Government or local bodies, local taxes, levies directly imposed on and paid by AAI on final product/service provided by AAI will be reviewed by the Authority for the purpose of corrections. Any additional expenditure by way of interest payments, penalties, fines and such penal levies associated with such statutory levies which AAI has to pay, for either any delay or non-compliance, the same will not be trued up.

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 Income Tax laws.

Authority's Examination

Adjustment for 30% of non-aeronautical revenues

14.2. AAI vide their submissions dated 01.03.2017 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 Capex

14.3. The Authority proposes to consider aeronautical Capex of ₹ 155.3 crore as given in Table 30 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 44.

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 12.13.

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 01.10.2017 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 45 - 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	0.0	31.8	39.6	48.2	53.3	172.9
As per Authority	0.0	8.3	27.9	36.1	43.1	115.4

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

Table 46 - 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	40.6	84.7	143.9	167.2	194.4
Aeronautical O&M (excluding CHQ/ RHQ Overheads)	26.4	29.9	31.8	33.7	35.9
CHQ/ RHQ Overheads	6.8	7.2	7.6	8.0	8.5
Depreciation as per IT Act	23.1	23.5	23.8	21.2	25.6
PBT	-15.7	24.1	80.7	104.3	124.5
Tax for aeronautical services	0.0	8.3	27.9	36.1	43.1

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 46 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) and 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 47 - 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	221.7	226.5	211.1	182.1	198.4
Return on Average Aeronautical RAB@14%	31.0	31.7	29.6	25.5	27.8
Aeronautical Operating Expenditure	35.2	39.6	42.2	45.0	48.1
Depreciation on aeronautical RAB	30.4	31.1	29.3	28.9	42.1
Aeronautical Corporate Tax @34.60%	0.0	31.8	39.7	48.2	53.3
Less- 30% of Non-Aeronautical Revenues	9.6	10.4	11.5	12.7	14.1
ARR as per AAI	87.1	123.8	129.2	134.9	157.2
Total ARR as per AAI	632.2				
No. of Passengers (as per Actual/Projected)	6,360,248	7,075,555	7,874,305	8,766,387	9,762,878
Discounted ARR	87.1	108.6	99.4	91.0	93.1
True up short fall in 1st control period as on 01.04.2016	143.7				
PV of ARR (including shortfall) for the control period as on 01.04.2016	622.9				
Total Passengers during the control period	39,839,373				
Yield per passenger for the control period (PV of ARR for the control period/Total passengers during the control period)	156.4				

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 48 - 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	257.5	276.0	291.7	275.3	303.5
Return on Average Aeronautical RAB@14%	36.0	38.6	40.8	38.5	42.5
Aeronautical Operating Expenditure	33.3	37.2	39.4	41.7	44.3
Depreciation on aeronautical RAB	13.3	15.0	16.5	16.2	17.3
Aeronautical Corporate Tax @34.6%	0.0	8.3	27.9	36.1	43.1
Less – 30% of Non-Aeronautical Revenues	9.3	9.7	10.7	11.7	12.8
True up short fall in 1st control period as on 01.04.2016	53.0				
ARR as per Authority	126.3	89.4	114.0	120.9	134.4
Total ARR as per Authority	585.0				
Discounted ARR	126.3	78.4	87.7	81.6	79.6
PV of ARR for the control period as on 01.04.2016	453.6				
No. of Passengers (as per Projected)	6,856,362	7,746,385	8,758,070	9,908,367	11,216,599
Total Passengers during the control period	44,485,783				
Yield per passenger for the control period (PV of ARR for the control period/Total passengers during the control period)	102.0				
Target yield per pax	123.8	129.0	134.4	140.0	145.9
Target Aeronautical Revenues	84.9	99.9	117.7	138.7	163.6
PV of Target Aeronautical Revenues for the control period as on 01.04.2016	453.6				

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 civil enclave Goa. The ATP(s) as submitted by AAI for the tariff years 2017-18 onwards (w.e.f. 01.04.2017) is annexed herewith for stakeholder consultation.

Authority's Examination

16.4. The Authority noted that landing revenues at civil enclave Goa is collected by Indian Navy as it is a civil enclave. The Authority notes that the MYTP submission of Indian Navy is incomplete and the Authority shall deal with the proposal separately.

16.5. The Authority noted that the tariffs at civil enclave Goa had been determined in FY 2000-2001 and it has not been revised since then.

16.6. The Authority noted that AAI's proposed tariff could not be applicable from 1st April, 2017.

16.7. The Authority noted that if the existing tariffs applicable at civil enclave Goa are not increased for the second control period, there will be shortfall of ₹ 178.1 crore vis-à-vis ARR. The shortfall can either be met by increasing various aeronautical charges such as parking & housing and fuel throughput or increasing UDF or both. Even with the increased parking & housing charges and fuel throughput charges, there is still aeronautical revenues shortfall left vis-à-vis ARR for which the UDF is proposed to reduce the gap. After considering the revised parking & housing and fuel throughput charges as proposed by AAI applicable from 01.10.2017, the resultant shortfall is ₹ 177.8 crore without the proposed UDF. To reduce the remaining shortfall, AAI has proposed the revised UDF of ₹ 350 per departing domestic passenger and ₹ 700 per departing international passenger as given in Table 50.

16.8. Further, the Authority noted that the revenue from tariffs and UDF as proposed by AAI to be applicable from 01.10.2017 will exceed the proposed ARR as per Authority for the 2nd control period. The resultant excess as per tariffs proposed by AAI as calculated on 01.04.2016 is provided in table below.

Table 49 - Projected Revenue, Target Revenue and shortfall/ excess based on AAI proposed

tariffs for the 2nd control period applicable from 01.10.2017

Projected Aero Revenue based on AAI proposed tariffs (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Landing (A)	0.0	0.0	0.0	0.0	0.0
Parking and Housing (B)	0.1	0.1	0.2	0.2	0.2
UDF/ PSF as per existing rates (C)	26.4	29.8	33.7	38.1	43.2
FTP+ITP and lease rentals (D)	2.0	2.2	2.6	3.0	3.4
Ground Handling Charges and lease rentals (E)	8.9	9.7	10.6	11.6	12.7
CUTE (F)	3.3	3.7	4.1	4.6	5.1
Cargo Charges (G)	0.0	0.0	0.0	0.0	0.0
Total Projected Revenues without increased UDF (H = A+B+C+D+E+F+G)	40.6	45.6	51.2	57.5	64.7
Target Aero Revenue	70.2	82.6	97.3	114.7	135.3
Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	29.5	37.0	46.1	57.1	70.6
PV value of shortfall as on 01.04.2016 with Discount rate (14.00%)	29.5	32.5	35.4	38.6	41.8
Total PV of shortfall as on 01.04.2016 for the control period	177.8				
UDF with revised rates proposed by AAI (I)	26.4	90.1	175.5	205.3	240.0
Total Projected Revenues with increased UDF (J = H-C+I)	40.6	105.8	193.0	224.7	261.5
Target Aero Revenue	93.6	110.2	129.8	153.0	180.5
Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	53.0	4.4	-63.2	-71.7	-81.1
PV value of short fall (+)/ excess (-) revenue as on 01.04.2016 with Discount rate (14.00%)	53.0	3.8	-48.6	-48.4	-48.0
Total PV of short fall (+)/ excess (-) difference as on 01.04.2016 for the control period	-88.2				

16.9. 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 per departing passenger for domestic and international passengers is revised as per Table 50 to be applicable from 01.10.2017.

16.10. The Authority proposes to merge UDF and PSF (facilitation) charges and only UDF

charges to be applicable on each domestic and international embarking passenger w.e.f. 01.10.2017.

16.11. The revised tariffs as applicable from 01.10.2017 as submitted by AAI and as proposed by the Authority are given in table below:

Table 50 - Revised aeronautical tariffs as submitted by AAI and as proposed by the Authority

Particular	Existing Tariff	Revised tariff by AAI	Revised tariff proposed by Authority
Housing Charges			
Up to 40 MT	-		
Above 40 MT up to 100 MT	-		
Above 100 MT	-		
Up to 25 MT		₹ 6 Per Hour Per MT	₹ 6 Per Hour Per MT
Above 25 MT up to 50 MT		₹ 150 + ₹ 8 per MT per Hour in excess of 25 MT	₹ 150 + ₹ 8 per MT per Hour in excess of 25 MT
Above 50 MT up to 100		₹ 350 + ₹ 16 per MT per Hour in excess of 50 MT	₹ 350 + ₹ 16 per MT per Hour in excess of 50 MT
Above 100 MT to 200 MT		₹ 1,150 + ₹ 20 per MT per Hours in excess of 100 MT	₹ 1,150 + ₹ 20 per MT per Hours in excess of 100 MT
Above 200 MT		₹ 3,150 + ₹ 22 per MT per Hours in excess of 200 MT	₹ 3,150 + ₹ 22 per MT per Hours in excess of 200 MT
Parking Charges			
Up to 100 MT	₹ 4.1 Per Hour Per MT		
Above 100 MT	₹ 410 + ₹ 5.4 per MT per Hour in excess of 100 MT		
Up to 25 MT		₹ 3 Per Hour Per MT	₹ 3 Per Hour Per MT
Above 25 MT up to 50 MT		₹ 75 + ₹ 4 per Hour per MT in excess of 25 MT	₹ 75 + ₹ 4 per Hour per MT in excess of 25 MT
Above 50 MT up to 100		₹ 175 + ₹ 8 per MT per Hour in excess of 50 MT	₹ 175 + ₹ 8 per MT per Hour in excess of 50 MT
Above 100 MT to 200 MT		₹ 575 + ₹ 10 per MT per Hours in	₹ 575 + ₹ 10 per MT per Hours in

Particular	Existing Tariff	Revised tariff by AAI	Revised tariff proposed by Authority
		excess of 100 MT	excess of 100 MT
Above 200 MT		₹ 1,575 + ₹ 11 per MT per Hours in excess of 200 MT	₹ 1,575 + ₹ 11 per MT per Hours in excess of 200 MT
Throughput Charges			
Rate per KL	₹ 106.75	₹ 112.1	₹ 112.1
Passenger Service Fee (PSF) – Facilitation			
Domestic Passenger (per embarking passenger)	₹ 77 per embarking passenger	₹ 350 per embarking passenger	Nil
	\$ 1.93 per embarking passenger	\$ 5.83 per embarking passenger	Nil
International Passenger (per embarking passenger)	₹ 77 per embarking passenger	₹ 700 per embarking passenger	Nil
	\$ 1.93 per embarking passenger	\$ 11.67 per embarking passenger	Nil
User Development Fee (UDF) (UDF proposed by Authority instead of PSF(FC) above)			
Domestic Passenger (per embarking passenger)	Nil	Nil	₹ 253
International Passenger (per embarking passenger)	Nil	Nil	₹ 495
Passenger Service Fee (PSF) – Security*			
Domestic Passenger (per embarking passenger)	₹ 130	₹ 130	₹ 130
	\$ 3.25	\$ 3.25	\$ 3.25
International Passenger (per embarking passenger)	₹ 130	₹ 130	₹ 130
	\$ 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

16.12. Additionally, from 01.04.2018, the increase in tariffs as submitted by AAI is given below. The Authority proposes to accept the increase in tariffs for the second control period as submitted by AAI.

16.12.1. Yearly increase of 4% per annum every subsequent year (FY 2018-19 onwards) in UDF per departing passenger

16.12.2. Yearly increase of 5% per annum every subsequent year (FY 2018-19 onwards) in fuel throughput charges during the 2nd control period

16.12.3. Yearly increase of 4% per annum every subsequent year (FY 2018-19 onwards) in parking and housing charges during the 2nd control period

16.13. The estimated aeronautical revenues based on tariffs as proposed by the Authority is indicated in Table 51.

Table 51 - Projected Revenue, Target Revenue and shortfall as per the Authority for the 2nd control period

Projected Aero Revenue based on Authority proposed tariffs (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Landing (A)	0.0	0.0	0.0	0.0	0.0
Parking and Housing (B)	0.1	0.1	0.2	0.2	0.2
UDF/ PSF as per existing rates (C)	26.4	29.8	33.7	38.1	43.2
FTP+ITP and lease rentals (D)	2.0	2.2	2.6	3.0	3.4
Ground Handling Charges and lease rentals (E)	8.9	9.7	10.6	11.6	12.7
CUTE (F)	3.3	3.7	4.1	4.6	5.1
Cargo Charges (G)	0.0	0.0	0.0	0.0	0.0
Total Projected Revenues without increased UDF (H = A+B+C+D+E+F+G)	40.6	45.6	51.2	57.5	64.7
Target Aero Revenue	70.2	82.6	97.3	114.7	135.3
Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	29.5	37.0	46.1	57.1	70.6
PV value of shortfall as on 01.04.2016 with Discount rate (14.00%)	29.5	32.5	35.4	38.6	41.8
Total PV of shortfall as on 01.04.2016 for the control period	177.8				
UDF with revised rates proposed by Authority (I)	26.4	69.0	126.3	147.8	172.9
Total Projected Revenues with increased UDF (J = H-C+I)	40.6	84.7	143.9	167.2	194.4
Target Aero Revenue	84.9	99.9	117.7	138.7	163.6
Short fall (+)/ Excess (-) in revenue, i.e. difference (Projected – Permissible)	44.2	15.2	-26.2	-28.5	-30.8
PV value of short fall (+)/ excess (-) revenue as on 01.04.2016 with Discount rate (14.00%)	44.2	13.3	-20.1	-19.2	-18.2

Projected Aero Revenue based on Authority proposed tariffs (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Total PV of short fall (+)/ excess (-) difference as on 01.04.2016 for the control period	0.0				

16.14. 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%.

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

16.16. The Authority notes that ASQ rating at civil enclave Goa has been more than 3.75 in every quarter of 1st control period as required under Section 6.14.3 of Airport Guidelines. Details of the ASQ ratings are provided below.

Table 52 – Quarterly ASQ rating of civil enclave at Goa during the 1st control period

Quarter	2012	2013	2014	2015	2016
Q1		4.02	4.05	4.19	4.79
Q2		4.00	4.15	4.73	4.86
Q3		4.03	4.21	4.72	4.40
Q4	4.08	3.98	4.30	4.65	4.30
Average	4.08	4.01	4.18	4.57	4.59

Proposal No. 12. Tariff rate card

12.a. To accept Annual Tariff Proposals as given in Table 50 (and Annexure) for determination of tariff during 2nd control period. Detailed tariff card is provided in Annexure for stakeholder comments.

12.b. 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 civil enclave Goa.

- 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. To merge UDF and PSF (facilitation) charges and only UDF charges to be applicable on each domestic and international embarking passenger w.e.f. 01.10.2017.
- 12.e. The Authority proposes to consider shortfall 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 **21.09.2017** 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

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(S. Machendranathan)
Chairperson

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Annexure 1 – Detailed Tariff Card as proposed by the Authority to be applicable from 01.10.2017 or date of issuance of the AIC, whichever is later to 31.03.2018.

I) 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 25 MT	₹ 3 Per Hour Per MT	₹ 6 Per Hour Per MT
Above 25 MT up to 50 MT	₹ 75 + ₹ 4 per Hour per MT in excess of 25 MT	₹ 150 + ₹ 8 per MT per Hour in excess of 25 MT
Above 50 MT up to 100	₹ 175 + ₹ 8 per MT per Hour in excess of 50 MT	₹ 350 + ₹ 16 per MT per Hour in excess of 50 MT
Above 100 MT to 200 MT	₹ 575 + ₹ 10 per MT per Hours in excess of 100 MT	₹ 1,150 + ₹ 20 per MT per Hours in excess of 100 MT
Above 200 MT	₹ 1,575 + ₹ 11 per MT per Hours in excess of 200 MT	₹ 3,150 + ₹ 22 per MT per Hours in excess of 200 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 take-off.
2)	For calculating chargeable parking time, part of an hour shall be rounded off to the nearest 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.
6)	It is proposed to waive off the night parking charges in principle for all domestic scheduled operators at Goa Airport if the State Government has brought the rate of tax (VAT) on ATF up to 5%. The above waiver of night parking charges (between 2200 hrs. to 0600 hrs) will be made applicable from the date of implementation of 5% tax on ATF by the State Govt. In the event of upward revision in the tax rate of ATF by the State Govt., the relief of free night parking charges will also be deemed to be withdrawn for all the airports within the jurisdiction of the said State.

III) THROUGHPUT CHARGES

Proposed
Proposed Rate Per KL (IN ₹)
112.1

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) USER DEVELOPMENT FEE (UDF)

Particulars	Proposed in ₹
Domestic per embarking passenger	₹ 253
International per embarking passenger	₹ 495

Notes

	Proposed
1)	Collection Charge: If the payment is made within 15 days of receipt of invoice then collection charges at ₹ 5 per departing passenger shall be paid by AAI. No collection charges shall be paid in case the airline fails to pay the UDF invoice to AAI within the credit period of 15 days or in case of any part payment. To be eligible to claim this collection charges, the airlines should have no overdue on any account with AAI. Wherever collection charges are payable the amount shall be settled within 15 days.
2)	No collection charges are payable to casual operator/non-scheduled operators
3)	For calculating the UDF in foreign currency, the RBI reference conversion rate as on the last day of the previous month for tickets issued in the 1 st fortnight and rate as on 15 th of the month for tickets issued in the 2 nd fortnight shall be adopted.
4)	Revised UDF charges will be applicable on tickets issued on or after 01.10.2017 or date of issuance of the AIC, whichever is later.

5)	No UDF will be levied for Transit Passengers
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VI) Exemption from levy and collection from UDF and 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 UDF & 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.

VII) 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 of GST. GST at the applicable rates are payable in addition to above charges.