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भारतीय विमानपत्तन आर्थिक विनियामक प्राधिकरण ऐरा भवन, प्रशासनिक कॉम्पलेक्स, सफदरजंग एयरपोर्ट, नई दिल्ली—110003

दिनांक: 1 सितंबर, 2017

विषय: नेताजी सुभाष चंद्र बोस अंतरराष्ट्रीय हवाई अड्डे, कोलकाता के दूसरे नियंत्रण अविध (01.04.2017 से 31.03.2021) में वैमानिक टैरिफ के निर्धारण के संबंध में।

उपर्युक्त विषय पर दिनांक 01.09.2017 का **परामर्श पत्र संख्या 19**/2017-18 सूचना एंव टिप्पणी के लिए संलग्न है।

भवदीय, भिष्टेश

(वी.के. सचदेवा)

उप महा प्रंबधक (वित्त)

सेवा में,

सभी पणधारी

Consultation Paper No. 19/2017-18



Airports Economic Regulatory Authority of India

In the matter of determination of aeronautical tariffs in respect of Netaji Subhash Chandra Bose International Airport (NSCBIA), Kolkata 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. Kolkata airport (NSCBIA), located at Dum Dum near the city of Kolkata is the fifth busiest airport in India and the main international airport in eastern India.
- 1.2. The traffic handled by NSCBIA during the 1st control period is given in table below:

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

Year	Dom. Pax (mn)	Int. Pax (mn)	Total Pax (mn)	Dom. ATMs	Int. ATMs	Total ATMs
2012	8.7	1.6	10.3	84,316	15,527	99,843
2013	8.5	1.7	10.2	79,597	13,733	93,330
2014	8.3	1.8	10.1	76,909	15,962	92,871
2015	9.0	1.9	10.9	80,859	16,269	97,128
2016	10.2	2.2	12.4	82,800	19,685	102,485

- 1.3. NSCBIA, 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 NSCBIA are provided in the table below:

Table 2 - Technical and Terminal building details of NSCBIA

Technical	Details of NSCBIA
Particulars	Details
Total airport area	1641 acres
Runway orientation and length	19L-01R and 3627 meter
	19R-01L
No. of Taxi Tracks	15
No. of Apron Bays	51
Aerodrome Category	4E
Navigational Aids	19L-CAT II, 01R- CAT IIIB;
	19R- CAT I, 01L – SALS
Operational hours	24 hours
Termina	building Details
Particulars	Integrated Terminal
Terminal Building Area	2,24,162 Sq.m
Immigration Counters	42 (Operational); 14 (Not in operation)
Customs Counters	12
Security Counters	36
Departure Conveyor	08
Arrival Conveyor	16
Peak hour passenger capacity	3725

Particulars	Integrated Terminal
No. of Check-in Counters (CUTE)	133
Total Area of Car Parking	45,715 Sq.m

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

$$ARR = \sum_{t=1}^{5} (ARRt)$$
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. Ot is the Aeronautical Operation and Maintenance Expenditure for year t, which include all expenditures incurred by the Airport Operator(s) towards aeronautical activities including expenditure incurred on statutory operating costs and other mandatory operating costs;
- 2.3.7. T_t is the Tax in year t, which includes payments by Airport Operator in respect of corporate tax on income from assets/ amenities/facilities/services taken into consideration for determination of ARR for year t;
- 2.3.8. α is 30% cross subsidy factor for revenue from services other than aeronautical services under Hybrid Till for 2nd control period. α is 100% cross

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

- 2.3.9. NAR_t is the revenue from services other than aeronautical services (Non-Aeronautical Revenues or NAR) for year t.
- 2.4. Based on ARR, Yield per Passenger is calculated as per formula given below:

Yield per Passenger (Y) =
$$\frac{\sum_{t=1}^{5} PV(ARRt)}{\sum_{t=1}^{5} (VEt)}$$

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. ARRt is the Aggregate Revenue Requirement for tariff year t.
- 2.5. While determining building blocks and ARR for NSCBIA, Authority proposes to-
 - 2.5.1. Allocate CHQ/ RHQ overhead expenses on revenue basis as per the approach followed by the Authority while determining tariffs for Guwahati and Lucknow airports during 1st control period
 - 2.5.2. Adopt depreciation rates consistent with Companies Act and for assets not defined in the Companies Act at 3.33% from FY 2011-12 onwards.
- 2.6. The Authority caps airport tariffs at a level where revenue generated through approved tariffs is equal to the permissible ARR for the Airport Operator. The Authority's approach on the above is detailed in subsequent sections.
- 2.7. The true-up for 1st control period and determination of building blocks for 2nd control period are detailed in subsequent sections.

3. Multi Year Tariff Proposal of NSCBIA

- 3.1. In the 1st control period, the Authority, vide its Order No. 35/2012-13 dated 23.01.2013 had decided to determine the Aggregate Revenue Requirement (ARR) for NSCBIA, Kolkata taking into account the investments and costs for both the airport services as well as cargo services. Accordingly, the Authority determined the tariffs for aeronautical services provided at NSCBIA with tariffs effective from 16.02.2013.
- 3.2. AAI made submissions dated 15.01.2016 to the Authority for determination of tariffs for 2nd control period. Subsequent to the announcement of National Civil Aviation Policy, AAI made revised submissions under Hybrid Till on 06.03.2017. AAI has further revised their submission under Hybrid Till on 09.05.2017, 12.05.2017 and on 29.05.2017 as part of clarifications submitted in line with the comments provided by AAI for Trivandrum airport consultation paper for the 2nd control period. AAI has not considered cargo related revenues, expenses and assets in the MYTP for 2nd control period and submitted that AAI Cargo Logistics and Allied Services Company Limited (AAICLAS) would file proposal for cargo tariffs for 2nd control period. The Authority has adopted the model proposed by AAI as on 06.03.2017 and considered subsequent submissions for this consultation paper.
- 3.3. AAI provides Communication, Navigation, Surveillance/ Air Traffic Management (CNS/ATM) services in addition to landing, parking and other aeronautical services at NSCBIA. AAI has submitted that the tariff proposal does not consider revenues, expenditure and assets on account of CNS/ATM services. This consultation paper discusses the determination of tariffs for aeronautical services at the airport excluding CNS/ ATM services.
- 3.4. AAI has informed that accounts of AAI are audited by C&AG of India as mandated by the AAI Act. The C&AG's resident audit party audits the financial records and statements of AAI airports, regional/ field offices. However, the C&AG issues the final audit certificate for the AAI as a whole and only trial balance is available for NSCBIA. 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 ₹ 246.5 crores.

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

S. No.	Particulars	Amount (₹ crore)
1	Original Cost of Airport Assets excluding CNS/ATM related assets	575.7
	as on 01.04.2011	373.7
2	Accumulated Depreciation as on 01.04.2011	329.2
3	Opening RAB[(1)-(2)] as on 01.04.2011	246.5

Permissible aeronautical revenues

4.3. AAI has calculated Aggregate Revenue Requirement of ₹ 3,229.5 crores (PV of ARR is ₹ 2,369.9 crores as on 1st April 2012) for 1st control period.

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

Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
Opening RAB	246.5	299.9	2,455.6	2,265.2	2,019.4
Assets capitalized during the year	114.3	2,433.6	92.3	36.1	51.4
Disposals/ Transfer	0.01	0.01	0.00	0.00	0.00
Depreciation	60.9	277.9	282.7	281.9	279.8
Closing RAB	299.9	2,455.6	2,265.2	2,019.4	1,791.0
Average RAB	273.2	1,377.7	2,360.4	2,142.3	1,905.2
Return on Average RAB@14%	38.2	192.9	330.5	299.9	266.7
Operating Expenditure	180.9	230.6	330.3	392.7	394.8
Depreciation	60.9	277.9	282.7	281.9	279.8
Corporate Tax	18.5	0.0	0.0	0.0	49.2
Less- Revenue from services other than Regulated services	109.6	115.7	120.1	157.8	175.7
ARR as per AAI	189.0	585.7	823.3	816.8	814.8
Total ARR as per AAI					3,229.5
Discounted ARR	189.0	513.8	633.5	551.3	482.4
PV of ARR for the control period					2,369.9

Actual aeronautical revenues

4.4. AAI has submitted that it has earned aeronautical revenues of ₹ 1,883.8 crores during the 1st control period. Correspondingly, AAI has submitted that it has a shortfall of ₹ 2,225.4 crores (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 $\mathbf{1}^{\text{st}}$ control period as per AAI Submission – Single Till

No.	Particulars (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
Α	Revenues from Regulated Se	ervices				
1	Landing Charges:					
1.1	Domestic	46.2	55.7	83.8	92.9	102.3
1.2	International	22.1	19.3	48.9	47.7	68.4
1.3	Total Landing Charges	68.3	75.0	132.6	140.5	170.7
2	Parking and Housing Charges:	2.4	3.0	7.4	7.3	3.9
3	PSF(Facilitation Charges(FC)):					
3.1	Domestic	31.9	33.8	0.3	0.0	0.0
3.2	International	4.4	4.6	0.0	0.0	0.0
3.3	Total PSF (FC)	36.3	38.3	0.3	0.0	0.0
4	User Development Fees (UD)F):			_	
4.1	Domestic	0.0	3.7	143.7	173.6	208.9
4.2	International	0.0	0.7	70.1	86.8	106.9
4.3	TOTAL UDF	0.0	4.4	213.7	260.5	315.7
5	Fuel Throughput Charges	25.8	23.8	27.5	27.5	37.8
6	Ground Handling Charges	6.6	4.9	7.8	10.5	22.4
7	Cargo revenues	36.5	32.5	33.8	35.9	44.1
8	CUTE services	0.0	0.4	8.0	7.9	10.0
	Total Aeronautical Revenues	175.9	182.1	431.0	490.0	604.7

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

No.	Components (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16	Total
1	ARR for year	189.0	585.7	823.3	816.8	814.8	3,229.5

No.	Components (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16	Total
2	Aeronautical Revenue	175.9	182.1	431.0	490.0	604.7	1,883.8
3	Shortfall	13.1	403.6	392.3	326.8	210.0	1,345.7
4	Future Value of shortfall as on 01.04.2017	28.7	777.0	662.6	484.1	273.0	2,225.4

Authority's Examination

- 4.5. The Authority proposes adjustments on the following building blocks for calculating true-up of 1st control period
 - 4.5.1. Adjustment of 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	Free hold land	0%
2	Runways, Taxiways & Aprons	13%
3	Roads bridges & culvert	13%
4	Terminal building	8%
5	Cargo complex	8%
6	Temporary building	100%
7	Residential building	5%
8	Security fencing – temporary	100%
9	Security fencing wall	8%
10	Security fencing	8%
11	Ancillary building	8%
12	Computer IT & hardware	20%
13	Software & intangible	20%
14	Plant & machinery	11%
15	Tools	20%
16	Equipment	20%
17	Vehicle	14%
18	Heavy vehicles	14%

No.	Asset Class	As per AAI
19	Vehicle car & jeep	14%
20	Electrical installations	11%
21	Air conditioning equipment	11%
22	Electronics installation	11%
23	Typewriter & other office equipment	18%
24	Furniture & fixture	20%
25	X ray baggage machine	11%
26	CFT & fire fighting	13%

- 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 from FY 2011-12 onwards
 - 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 28.
- 4.8. Depreciation for the 1st control period has been calculated on the basis of actual date of capitalization of assets.
- 4.9. The revised depreciation for the 1st control period under Single Till is given below:

Table 8 – The Authority's consideration of depreciation for 1st control period – Single Till

No.	Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16	Total
1	As per AAI	60.9	277.9	282.7	281.9	279.8	1,183.2
2	As per Authority	18.4	80.5	83.5	154.0	156.6	492.9

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 (₹ 1.6 crores in FY 2011-12) 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 – The Authority's consideration of average RAB for 1st control period – Single Till

No	Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16				
1		As per AAI								
	Opening RAB	246.5	299.9	2,455.6	2,265.2	2,019.4				
	Additions	114.3	2,433.6	92.3	36.1	51.4				
	Disposals	0.01	0.01	0.00	0.00	0.00				
	Depreciation	60.9	277.9	282.7	281.9	279.8				
	Closing RAB	299.9	2,455.6	2,265.2	2,019.4	1,791.0				
	Average RAB	273.2	1,377.7	2,360.4	2,142.3	1,905.2				
2			As per Autho	rity						
	Opening RAB	244.9	340.9	2,693.9	2,702.7	2,584.9				
	Additions	114.3	2,433.6	92.3	36.1	51.4				
	Disposals	0	0	0	0	0				
	Depreciation	18.4	80.5	83.5	154.0	156.6				
	Closing RAB	340.9	2,693.9	2,702.7	2,584.9	2,479.7				
	Average RAB	292.9	1,517.4	2,698.3	2,643.8	2,532.3				

Adjustment for Non-Aeronautical revenues

- 4.13. The Authority noted that AAI has considered lease rental and rent revenues from cargo, ground handling agencies and oil companies as non-aeronautical revenues during the 1st control period. As per the provisions of the AERA Act, the services rendered in respect of ground handling, oil companies and cargo are aeronautical services.
- 4.14. The Authority proposes to consider the revenues from 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)	109.6	115.7	120.1	157.8	175.7
Adjustment					
Revenue from Cargo, Ground handling and fuel services treated as aeronautical (2)	10.3	11.6	11.4	23.7	38.9
NAR as per Authority (3 = 1 - 2)	99.4	104.1	108.7	134.1	136.8

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 allocation for NSCBIA consist of two components Expenditure for NSCBIA employee's retirement benefit allocated at CHQ and overheads at CHQ. The CHQ expense considered for apportionment have been netted off against the income received by CHQ. For NSCBIA, RHQ overheads of eastern region has not been apportioned to Kolkata airport as it directly reports to CHQ and not to RHQ.
- 4.16. The retirement benefit is allocated on the basis of number of employees at NSCBIA. The Authority proposes to allocate the CHQ overhead expenses for the airport services after excluding the ANS expenses on revenue basis which is consistent with the approach adopted by the Authority in MYTP of 1st Control Period for Guwahati and Lucknow airports. The Authority observes that as per the above methodology the CHQ overhead expenses are allocated in proportion to the capacity of the airport to absorb higher cost of CHQ. Under this methodology, a portion of CHQ expenses are allocated to Delhi and Mumbai airports based on revenue received by AAI from these airports.

Table 11 - Summary of CHQ/ RHQ Overheads as submitted by AAI for 1st control period

No.	in INR cr.	2012	2013	2014	2015	2016
	Apportionment of CHQ/ RHQ overheads					
1	CHQ Expenses	259.3	331.2	303.8	397.3	404.6
2	Less - CHQ Revenue	93.8	152.6	183.5	236.8	227.7
3	Net CHQ Expenses (1-2)	165.6	178.7	120.3	160.5	176.9
	CHQ/ RHQ Overheads allocated to NSCBIA	15.2	14.0	13.1	17.8	19.8
	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 NSCBIA	17.7	39.3	20.5	35.3	22.5

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

4.18. 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 1^{st} control period -Single Till

No.	Particulars (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
1	Pay roll Expenditure of NSCBIA	91.3	100.0	116.1	123.3	125.9
2	Expenditure for NSCBIA employees' retirement benefits allocated at CHQ	17.7	39.3	20.5	35.3	22.5
Α	Total Pay roll Expenditure (1+2)	108.9	139.3	136.5	158.7	148.4
3	Administrative and General Expenditure	6.3	5.5	3.9	7.2	9.6
4	Apportionment of administration & General expenditure of CHQ	15.2	14.0	13.1	17.8	19.8
В	Total Administration & General Expenditure(3+4)	21.5	19.6	17.0	24.9	29.3
С	Repairs and Maintenance Expenditure	29.4	24.1	25.7	41.0	43.3
5	Power Charges	13.4	28.4	43.8	53.1	61.9
6	Other Charges	2.2	2.3	5.6	8.7	12.4
D	Utility and Outsourcing Expenditure	15.6	30.7	49.3	61.8	74.3
E	Other Outflows	0.8	1.0	0.8	0.9	1.0
	Total (A+B+C+D+E)	176.3	214.7	229.3	287.4	296.3

Adjustment in base year for calculating present value of shortfall

4.19. 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

- 4.20. The tax calculation as submitted by AAI for 1st control period apportions actual tax liability of AAI based on the profit before tax of NSCBIA and profit before tax of AAI.
- 4.21. 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 NSCBIA 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.

4.22. AAI has submitted revised tax calculations based on standalone financials of NSCBIA.

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	186.2	193.7	442.4	513.7	647.1
Non-Aeronautical Revenues	99.4	104.1	108.7	134.1	133.3
O&M (excluding retirement benefits and CHQ/ RHQ Overheads)	143.4	161.4	195.8	234.2	254.0
Retirement benefits and CHQ/ RHQ Overheads	32.9	53.3	33.5	53.1	42.3
Depreciation as per IT Act	50.4	327.5	295.2	261.9	236.3
PBT	58.9	-244.4	26.6	98.5	247.7
Тах	19.1	0.0	9.0	33.5	85.7

Revised Aggregate Revenue Requirement

- 4.23. The ARR for the 1st control period has been revised based on adjustments detailed above.
 - 4.23.1. Change in depreciation rates as per Table 28
 - 4.23.2. Apportionment of CHQ/RHQ costs and change in tax calculation
 - 4.23.3. Lease rentals/rents from ground handling agencies and oil companies to be treated as aeronautical revenues
 - 4.23.4. 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	292.9	1,517.4	2,698.3	2,643.8	2,532.3
Return on Average RAB@14%	41.0	212.4	377.8	370.1	354.5
Operating Expenditure	176.3	214.7	229.3	287.4	296.3
Depreciation	18.4	80.5	83.5	154.0	156.6
Corporate Tax	19.1	0.0	9.0	33.5	85.7
Less- Revenue from services other than Regulated services	99.4	104.1	108.7	134.1	136.8
ARR as per Authority	155.4	403.6	590.9	710.8	756.3
Total ARR as per Authority					2,617.0

Details (₹ crore)	2011-12	2012-13	2013-14	2014-15	2015-16
Discounted ARR	155.4	354.0	454.7	479.8	447.8
PV of ARR for the control Period as on 01.04.2012					1,891.7

4.24. 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)	155.4	403.6	590.9	710.8	759.8	2,617.0
2	Aeronautical Revenue	186.2	193.7	442.4	513.7	643.6	1,979.6
3	Shortfall	-30.8	209.9	148.4	197.1	112.8	637.4
	Future Value of shortfall as on 01.04.2016	-59.2	354.5	219.9	256.2	128.5	899.9

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

- 1.a. The Authority proposes to true-up the 1st control period on the basis of Single Till
- 1.b. The Authority proposes to apportion CHQ/RHQ overheads on revenue basis.
- 1.c. The Authority proposes to consider the revenues from Cargo facility, Ground Handling Services and Supply of fuel to aircraft including land lease rentals as aeronautical revenue.
- 1.d. The Authority proposes the following depreciation rates.
 - a. For asset types not defined under Companies Act (runway, taxiway and aprons):3.33% based on useful life of 30 years from FY 2011-12 onwards
 - b. For asset types defined under Companies Act: rates prevalent under the Companies Act 1956 till FY 2013-14 and as per the Companies Act 2013 from FY 2014-15 onwards as the effective date of implementation of the Companies Act 2013 is 01.04.2014. The depreciation rates as submitted by AAI and as considered by the Authority are given in Table 28.
- 1.e. The Authority proposes to consider short fall of ₹ 899.9 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

		Passenger			ATM	
YEAR	Domestic	International	Combined	Domestic	International	Combined
2016-17	16%	3%	14%	12%	2%	10%
2017-18	10%	7%	10%	6%	5%	6%
2018-19	10%	7%	10%	6%	5%	6%
2019-20	10%	7%	10%	6%	5%	6%
2020-21	10%	7%	10%	6%	5%	6%

- 5.2. AAI submitted that traffic growth rate for FY 2016-17 is based on extrapolation of actual traffic data from April, 2016 to February, 2017.
- 5.3. As part of clarifications provided by AAI dated 09.05.2017, AAI has revised the traffic growth rates for FY 2016-17 as per actuals for the year.
- 5.4. AAI submitted that the international ATM traffic in FY 2015-16 has increased by 18% which is higher than the 10-year CAGR due to flights diverted to Kolkata Airport from Nepal because of fuel shortage caused by blockade at Nepal border in FY 2015-16.
- 5.5. AAI submitted that the negative growth in FY 2016-17 for international ATM traffic of 5% is due to shift to larger aircrafts from smaller aircrafts operated by airlines at Kolkata Airport.
- 5.6. AAI submitted that the low growth in FY 2016-17 of international passenger traffic of 4% compared to 10-year CAGR is due to the withdrawal of operations by United Bangla airline at the Kolkata Airport.

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- 5.7. The Authority observed that the actual traffic data is available for FY 2016-17 for NSCBIA. 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.
- 5.8. 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 NSCBIA. The details have been provided in table below:

Table 17 - CAGR for Traffic at NSCBIA

	Growth rates as per AAI (FY18 to FY21)	10 Year CAGR (FY06 to FY16)	5 Year CAGR (FY11 to FY16)
		Passenger	
Domestic	10%	11%	5%
International	7%	11%	9%
		ATM	
Domestic	6%	7%	1%
International	5%	8%	7%

- 5.9. After evaluation of 5 and 10 year CAGR of traffic, the Authority is of the view that 10 years CAGR provides more realistic traffic growth rates for future projections of domestic passenger and ATM traffic given the introduction of RCS by the government and recent growth in passenger traffic in India. Hence, the Authority proposes to adopt growth rates for domestic passenger and ATM traffic from FY 2017-18 to FY 2020-21 based on 10 years CAGR.
- 5.10. The Authority proposes to consider the growth rate as submitted by AAI for international passenger and ATM traffic due to volatility of international traffic in last few years.

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

		Passenger			ATM	
YEAR	Domestic	International	Combined	Domestic	International	Combined
			Growth Rates			
2016-17	28%	4%	24%	24%	-5%	19%
2017-18	11%	7%	11%	7%	5%	7%
2018-19	11%	7%	11%	7%	5%	7%
2019-20	11%	7%	11%	7%	5%	7%
2020-21	11%	7%	11%	7%	5%	7%
			Traffic			
2016-17	13,589,468	2,230,071	15,819,539	105,783	18,371	124,154
2017-18	15,113,297	2,386,176	17,499,473	113,431	19,290	132,720
2018-19	16,807,997	2,553,208	19,361,205	121,631	20,254	141,885
2019-20	18,692,729	2,731,933	21,424,662	130,424	21,267	151,691
2020-21	20,788,801	2,923,168	23,711,970	139,853	22,330	162,183

5.11. 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 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 (17 employees) to total staff (1,013 employees) and ratio of staff providing aeronautical services (921 employees) to total staff (1,013 employees). The operational expenditure of cargo and manpower (75 employees) has not been considered.
 - c) Operational Building ratio ratio based on area utilization for 60.35% Aeronautical, 3.46% Non-Aeronautical and 36.19% for Eastern Region usage
 - d) Quarter ratio for residential building Based on employees allotted quarters (2.56%, 3.21% and 94.23% for cargo, non-aero and aeronautical components respectively)
- 6.3. The allocation of gross block of assets as on 01.04.2016 as submitted by AAI is given in the table below:

Table 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	Free hold land	1.6	1.6	100%
2	Runways, Taxiways & Aprons	265.7	265.7	100%
3	Roads bridges & culvert	77.0	78.0	99%
4	Terminal building	1,770.9	1,891.0	94%
5	Cargo complex	0.0	42.1	0%
6	Temporary building	1.6	1.6	100%
7	Residential building	14.4	14.8	97%
8	Security fencing – temporary	2.0	2.0	100%
9	Security fencing wall	10.4	10.4	100%
10	Security fencing	2.3	2.3	100%
11	Ancillary building	23.5	26.5	89%

Sr. No.	Assets	Aero Assets (₹ crore)	Total Assets (₹ crore)	% Aero
12	Computer IT & hardware	20.1	21.0	96%
13	Software & intangible	1.0	1.2	84%
14	Plant & machinery	99.1	99.1	100%
15	Tools	23.9	23.9	100%
16	Equipment	2.0	2.0	100%
17	Vehicle	0.9	0.9	100%
18	Heavy vehicles	0.8	0.8	100%
19	Vehicle car & jeep	2.4	2.4	100%
20	Electrical installations	593.2	595.9	100%
21	Air conditioning equipment	11.0	11.1	99%
22	Electronics installation	51.5	51.5	100%
23	Typewriter & other office equipment	0.9	0.9	100%
24	Furniture & fixture	18.9	19.0	99%
25	X ray baggage machine	86.0	86.0	100%
26	CFT & fire fighting	51.6	51.6	100%
	Total	3,132.7	3,303.4	95%

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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 06.03.2017.

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

S.No.	Category	Integrated Terminal Building (Sq.m)
1	Ground Handling	44.6
2	Airlines 1	2,583.1
3	Airlines 2	2,608.8
4	Regulatory Bodies	2,182.3
5	Commercial Agencies	7,281.8
6	Transit passenger accommodation	391.2
	Total Non-aeronautical area	15,091.8
	Total Terminal area	224,162.0
	TB Ratio	6.73%

6.5. The Authority observed that the percentage of non-aeronautical area is lower compared to similar airports. The Authority proposes to adopt 92.5% as aeronautical

- area for asset allocation of Terminal related assets to encourage growth of NAR which would cross-subsidize aeronautical charges.
- 6.6. Specific assets under Furniture & Fixtures, Plant & Machinery, Tools, Equipment and type writer & other office equipment inside 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 the costs of hangars have been excluded from aeronautical RAB.
- 6.8. The Authority proposes to consider car park related assets as 100% non-aeronautical assets.
- 6.9. Specific assets under Electrical installations, Air conditioning equipment and Electronics installation 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%.
- 6.10. Assets related to vehicles have been considered as aeronautical assets by AAI. The Authority proposes to use the employee ratio of 91% (ratio of employees for aeronautical activities to total employees) for allocation of specific assets related to vehicles (Vehicle Cars & Jeep).
- 6.11. The Authority requested AAI to clarify the use of old terminal building at Kolkata Airport after the commissioning of New Integrated Terminal Building. AAI in their clarification dated 29.06.2017 submitted that the old terminal building is being used as Cargo Terminal and assets for old terminal building have been excluded from RAB of 2nd control period.
- 6.12. The Authority notes that only few cargo related assets have been excluded by AAI from RAB (remaining cargo assets have been included as part of RAB) while all expenses and revenues from cargo have been excluded completely while preparing the MYTP for 2nd control period. As part of the clarifications provided dated 09.05.2017 and 29.05.2017, AAI submitted that cargo assets, expenses and income have not been considered in the 2nd control period. As per AAI clarifications, AAI cargo logistics and allied services company limited (AAICLAS) is managing cargo activities at Kolkata

Airport, which is 100% subsidiary of AAI. AAICLAS would file cargo MYTP of Kolkata separately. The Authority proposes to exclude all cargo related assets from RAB for determination of tariff for aeronautical services at NSCBIA.

6.13. 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	Roads bridges & culvert	90.1%	Total assets are ₹ 78.0 crores out of which ₹ 70.3 crores are purely aeronautical assets. Cargo related assets have been excluded from aeronautical RAB.
2	Terminal building	92.1%	Total assets are ₹ 1,891.0 crores out of which ₹ 54.1 crores are aeronautical assets and common assets are ₹ 1,831.1 crores which have been allocated based on 92.5% ratio towards aeronautical component based on terminal building area for terminal related assets and 60.35% ratio towards aeronautical component based on operational building area.
3	Residential building	95.8%	Total assets are ₹ 14.8 crores out of which ₹ 4.0 crores are purely aeronautical assets and common assets are ₹ 10.8 crores which have been allocated based on 94.23% ratio towards aeronautical component based on quarters' ratio.
4	Ancillary building	88.1%	Total assets are ₹ 26.5 crores out of which ₹ 17.1 crores are purely aeronautical assets and common assets are ₹ 6.7 crores which have been allocated based on 92.5% ratio towards aeronautical component based on terminal building area for terminal related assets. Cargo related assets have been excluded from aeronautical RAB. Car park related assets have been considered as non-aeronautical.
5	Computer IT & hardware	84.2%	Total assets are ₹ 21.0 crores out of which ₹ 4.8 crores are purely aeronautical assets and common assets are ₹ 14.0 crores which have been allocated based on 92.5% ratio towards aeronautical component based on terminal building area for terminal related assets and direct allocation of computers for aero, cargo and non-aeronautical activities. Cargo related

Sr. No.	Particulars	Aero Assets	Justification
			assets have been excluded from aeronautical RAB.
6	Software &intangible	6.1%	Total assets are ₹ 1.2 crores out of which common assets are ₹ 0.1 crores which have been allocated based on direct allocation of computers for aero, cargo and non-aeronautical activities. Cargo related assets have been excluded from aeronautical RAB.
7	Plant & machinery	77.0%	Total assets are ₹ 99.1 crores out of which ₹ 29.0 crores are purely aeronautical assets and common assets are ₹ 51.2 crores which have been allocated based on 92.5% ratio towards aeronautical component based on terminal building area for terminal related assets. Cargo related assets have been excluded from aeronautical RAB.
8	Tools	95.9%	Total assets are ₹ 23.9 crores out of which ₹ 12.7 crores are purely aeronautical assets and common assets are ₹ 11.1 crores which have been allocated based on 92.5% ratio towards aeronautical component based on terminal building area for terminal related assets. Cargo related assets have been excluded from aeronautical RAB.
9	Equipment	70.5%	Total assets are ₹ 2.0 crores out of which ₹ 1.4 crores are purely aeronautical assets. Cargo related assets have been excluded from aeronautical RAB.
10	Vehicle Car & Jeep	90.9%	Total assets are ₹ 2.4 crores which have been allocated based on 90.919% ratio towards aeronautical component based on employees' ratio. Cargo related assets have been excluded from aeronautical RAB.
11	Electrical installations	92.3%	Total assets are ₹ 595.9 crores out of which ₹ 86.7 crores are purely aeronautical assets and common assets are ₹ 503.3 crores which have been allocated based on 92.5% ratio towards aeronautical component based on terminal building area for terminal related assets. Cargo related assets have been excluded from aeronautical RAB.
12	Air conditioning equip	92.1%	Total assets are ₹ 11.1 crores out of which ₹ 8.8 crores are purely aeronautical assets and

Sr. No.	Particulars	Aero Assets	Justification
			common assets are ₹ 1.5 crores which have
			been allocated based on 92.5% ratio towards
			aeronautical component based on terminal
			building area for terminal related assets. Cargo
			related assets have been excluded from
	- · · ·	05.00/	aeronautical RAB.
	Electronics	95.9%	Total assets are ₹ 51.5 crores out of which ₹
	installation		42.6 crores are purely aeronautical assets and common assets are ₹ 7.4 crores which have
			been allocated based on 92.5% ratio towards
13			aeronautical component based on terminal
			building area for terminal related assets. Cargo
			related assets have been excluded from
			aeronautical RAB.
	Furniture & fixture	83.0%	Total assets are ₹ 19.0 crores out of which ₹ 8.0
			crores are purely aeronautical assets and
			common assets are ₹ 10.4 crores which have
			been allocated based on 92.5% ratio towards
14			aeronautical component based on terminal
			building area for terminal related assets and
			60.35% ratio towards aeronautical component
			based on operational building area. Cargo related assets have been excluded from
			aeronautical RAB.
	CFT & Firefighting	98.8%	Total assets are ₹ 51.6 crores out of which ₹
		30.070	51.0 crores are purely airport related
15			aeronautical assets. Cargo related assets have
			been excluded from aeronautical RAB.

- 6.14. The cost of land has been excluded from the RAB of 2nd control period as in Para 4.11.
- 6.15. 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	Free hold land	-	-	-
2	Runways, Taxiways & Aprons	265.7	265.7	100%
3	Roads bridges & culvert	70.3	78.0	90%
4	Terminal building	1,741.4	1,891.0	92%

Sr.	Assets	Aero Assets	Total Assets	% Aero
No.		(₹ crore)	(₹ crore)	
5	Cargo complex	0.0	42.1	0%
6	Temporary building	1.6	1.6	100%
7	Residential building	14.2	14.8	96%
8	Security fencing – temporary	2.0	2.0	100%
9	Security fencing wall	10.4	10.4	100%
10	Security fencing	2.3	2.3	100%
11	Ancillary building	23.3	26.5	88%
12	Computer IT & hardware	17.7	21.0	84%
13	Software & intangible	0.1	1.2	6%
14	Plant & machinery	76.4	99.1	77%
15	Tools	22.9	23.9	96%
16	Equipment	1.4	2.0	70%
17	Vehicle	0.9	0.9	100%
18	Heavy vehicles	0.8	0.8	100%
19	Vehicle car & jeep	2.2	2.4	91%
20	Electrical installations	550.1	595.9	92%
21	Air conditioning equipment	10.2	11.1	92%
22	Electronics installation	49.4	51.5	96%
23	Typewriter & other office	0.9	0.9	98%
	equipment	0.9	0.9	90/0
24	Furniture & fixture	15.8	19.0	83%
25	X ray baggage machine	86.0	86.0	100%
26	CFT & fire fighting	51.0	51.6	99%
	Total	3,017.0	3,301.9	91%

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 06.03.2017 is ₹ 1,694.2 crores

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	532.5
2	Aeronautical asset addition during the 1 st control period	2,600.2
3	Cost of Aeronautical Assets [(1)+(2)] as on 01.04.2016	3,132.7
4	Accumulated Depreciation as on 01.04.2016	1,438.5
5	Opening RAB[(3)-(4)] as on 01.04.2016	1,694.2

- 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 2^{nd} control period considered by the Authority under Hybrid Till is $\stackrel{?}{=}$ 2,281.1 crores.

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

S.	Particulars	Amount
No.		(₹ crore)
1	Original Cost of Airport Aeronautical Assets excluding	487.2
	CNS/ATM related assets as on 01.04.2011	407.2
2	Aeronautical asset addition during the 1 st control period	2,529.9
3	Cost of Aeronautical Assets [(1)+(2)] as on 01.04.2016	3,017.0
4	Accumulated Depreciation as on 01.04.2016	735.9
5	Opening RAB[(3)-(4)] as on 01.04.2016	2,281.1

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 ₹ 2,281.1 crores

8. Capital Expenditure for Second control period

8.1. AAI has in their submissions dated 06.03.2017 submitted aeronautical capital expenditure of ₹ 980.5 crores for the 2nd control period which was revised to ₹ 787.6 crores during submissions dated 09.05.2017 and 29.06.2017 as shown below:

Table 25 – Aeronautical assets to be capitalized at NSCBIA 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	0.0	314.6	0.0	0.0	30.0
2	Roads bridges & culvert	0.0	97.7	0.0	80.0	50.0
3	Terminal building	0.0	39.6	0.0	0.0	175.0
4	Temporary building	0.0	0.3	0.0	0.0	0.0
5	Residential building	0.0	13.9	0.0	0.0	0.0
6	Ancillary building	0.0	5.2	0.0	0.0	0.0
7	Equipment	0.0	1.2	0.0	0.0	0.0
8	Electrical installations	1.0	172.1	0.0	0.0	0.0
	Total (₹ 980.5 crores)	1.0	644.5	0.0	80.0	255.0
	Revised capital expenditure su	ubmitted b	y AAI date	d 09.05.20	17 and 29.	06.2017
1	Runways taxiways & aprons	4.8	105.6	212.0	0.0	0.0
2	Roads bridges & culvert	11.4	5.0	0.0	104.0	0.0
3	Terminal building	8.3	23.6	175.0	0.0	0.0
4	Temporary building	0.0	0.3	0.0	0.0	0.0
5	Residential building	0.9	0.0	0.0	0.0	0.0
6	Ancillary building	2.6	2.9	0.0	0.0	0.0
7	Equipment	0.0	2.5	0.0	0.0	0.0
8	Electrical installations	4.2	124.6	0.0	0.0	0.0
	Total (₹ 787.6 crores)	32.1	264.5	387.0	104.0	0.0

- 8.2. AAI has submitted following details of the proposed capital works to be undertaken during the control period:
 - 8.2.1. Strengthening main runway (₹ 61.7 crores under Runways, Taxiways & Apron in FY 2017-18)

The main runway was last resurfaced in FY 2003-04. In order to improve the riding quality, resurfacing was necessary. Further the main runway has been equipped with CAT-III B lighting system including navigational aids for smooth movement of aircraft during low visibility.

8.2.2. Construction of Isolation bay (₹ 31 crores under Runways, Taxiways & Apron in FY 2017-18)

The dumbbell / turning pad at 01L end of secondary runway was used as

- Isolation bay. This restricts operation of the secondary runway. Accordingly the construction of Isolation bay at Kolkata Airport was a mandatory requirement as per Civil Aviation requirement.
- 8.2.3. Extension of F taxi track towards Northern side (₹ 50 crores under Runways, Taxiways & Apron in FY 2018-19)
 - In order to enhance the capacity of Secondary runway, the extension of 'F' taxi track on the northern side is an essential requirement, since separation distance between secondary runway and alpha taxi track restricts aircraft movement.
- 8.2.4. Resurfacing secondary runway 19R/01L (₹ 40 crores under Runways, Taxiways& Apron in FY 2018-19)
 - The secondary runway was last resurfaced on 2005-06. As the bituminous pavement has lost its life in binding properties, pitting, bleeding and patches with slippage cracks resurfacing is an urgent requirement.
- 8.2.5. Construction of remote bays Eastern side of main runway (₹ 92 crores under Runways, Taxiways & Apron in FY 2018-19)
 - With the introduction of new flights by the existing airlines and new airlines including RCS operation, Kolkata Airport is a hub for the eastern zone. These remote bays are required for aircraft movement and night parking.
- 8.2.6. Extension of Apron on South side of ITB (₹ 30 crores under Runways, Taxiways & Apron in FY 2018-19)
 - Presently the area identified is a low lying area and the scheme is at a conceptualized stage by the Planning Department.
- 8.2.7. Construction of 03 hangars with associated apron and taxi track towards Narayanpur side (₹ 104 crores under Roads, Bridges & culverts in FY 2019-20) The existing hangars at Kolkata Airport was constructed prior to world war two. In order to increase parking bays, these hangars which are in a dilapidated condition require to be demolished. Accordingly 03 nos. new hangars with associated apron and taxi track are required to be constructed.
- 8.2.8. Extension of Airside corridor T2 International & Domestic (₹ 175 crores under

Terminal Building in FY 2018-19)

The passenger movement has already reached 16 million (approx.) in FY 2016-17. In order to meet the present average growth rate of 20% (considering average of past 02 years growth), the expansion of Security Hold Area is essential as the passenger movement is likely to reach 19 million by the end of FY 2017-18 and so on. Hence, there is a need for expansion for air side corridor for which the capital expenditure is planned.

8.2.9. Provision of Solar Power Plant (₹ 92.3 crores total, ₹ 4.7 crore under Terminal Building in FY 2016-17 and ₹ 87.6 crore under Electrical Installation in FY 2017-18)

The generation of green power is a national agenda where GOI has set a target of 175 GW of renewable power installed capacity by the end of 2022. As a part to fulfil the target as well as to save expenditure on electricity bills & sell the extra generated power if any, this scheme has been finalized in the meeting conveyed by the Chairman, AAI in the office of Secretary, MNRE on 17.05.2015 for generating 15MW power depending on space available at NSCBI Airport, Kolkata for this purpose.

Authority's Examination

- 8.3. The Authority requested AAI to submit the aeronautical capital expenditure to be incurred in FY 2016-17 and in 2nd control period based on actual capital expenditure in FY 2016-17. In response to this, AAI vide submission dated 09.05.2017 provided the revised aeronautical capital expenditure to be incurred in 2nd control period. AAI further submitted the revised capital expenditure in the meeting dated 29.06.2017. The Authority has accordingly updated the capital expenditure for the 2nd control period.
- 8.4. The Authority noted that AAI has considered capital expenditure towards modification of ceremonial lounge ITB (civil works and electrical works) as aeronautical capital expenditure in FY 2016-17 (₹ 0.8 crore) and FY 2017-18 (₹ 1.3 crore). The Authority proposes to exclude capital expenditure towards modification of ceremonial lounge ITB as it is non-aeronautical asset.
- 8.5. The Authority noted that AAI has considered capital expenditure towards construction

- of 03 hangars with associated apron and taxi track towards Narayanpur side (₹ 104 crore) as aeronautical capital expenditure in FY 2019-20. The Authority proposes to exclude capital expenditure towards construction of 03 hangars with associated apron and taxi track towards Narayanpur side as hangars have been considered as non-aeronautical assets.
- 8.6. The Authority noted that AAI has included capital expenditure towards provision of solar power plant (civil works as part of terminal building ₹ 4.7 crore in FY 2016-17 and electrical works as part of Electrical installation ₹ 87.6 crore in FY 2017-18) as 100% aeronautical capital expenditure in the 2nd control period. The Authority proposes to consider the allocation of solar power plant capital expenditure based on 92.5% ratio as aeronautical capital expenditure.
- 8.7. The Authority proposes to consider aeronautical capital expenditure for strengthening main runway (₹ 61.7 crore in FY 2017-18) and construction of isolation bay (₹ 31 crore in FY 2017-18) as submitted by AAI under runways, taxiways and apron.
- 8.8. The Authority proposes to consider aeronautical capital expenditure for other miscellaneous works for runways, taxiways and aprons (₹ 4.8 crore in FY 2016-17 and ₹ 12.9 crore in FY 2017-18) as submitted by AAI.
- 8.9. The Authority proposes to consider aeronautical capital expenditure for resurfacing secondary runway 19R/01L (₹ 40 crores in FY 2018-19) as submitted by AAI under runways, taxiways and apron.
- 8.10. The Authority noted that the total capital expenditure for extension of F taxi track towards Northern side is ₹ 50 crores in FY 2018-19 with total area of 70,000 Sq.m and per sq. m. cost is ₹ 7,143 which is more than normative benchmark of ₹ 4,700 for Runway/taxiway and aprons (excluding earthwork up to subgrade level).
- 8.11. The Authority noted that the total capital expenditure for extension of apron on southern side of ITB is ₹ 30 crores in FY 2018-19 with total area of 42,300 Sq.m and per sq. m. cost is ₹ 7,092 which is more than normative benchmark of ₹ 4,700 for Runway/taxiway and aprons (excluding earthwork up to subgrade level).
- 8.12. The Authority noted that the total capital expenditure for construction of remote bays eastern side of main runway is ₹ 92 crores in FY 2018-19 for 23 bays with total

- area of 1,30,000 Sq.m. For construction of remote bays, per sq. m. cost is ₹ 7,077 which is more than normative benchmark of ₹ 4,700 for Runway/taxiway and aprons (excluding earthwork up to subgrade level).
- 8.13. The Authority requested justification from AAI for higher than normative benchmark costs for extension of F taxi track towards Northern side (₹ 50 crore), construction of remote bays Eastern side of main runway (₹ 92 crore) and extension of Apron on South side of ITB (₹ 30 crore). AAI, as per the clarification provided dated 11.07.2017, submitted that all the works mentioned herein are rigid pavements. Considering the soil condition of the proposed site and as per the structural design of rigid pavements done by AAI Structural Design cell of CHQ, the pavement consist of a sand and moorum filling, granular sub base, wet mix macadam, dry rolled lean concrete and finally pavement quality concrete as the top layer which are mandatorily required as per existing runway formation level. Accordingly, the rates work out based on DSR-2016 + up to date Cost Index of 28.43%, the cost per Sq.m works out to ₹ 7,100.
- 8.14. The Authority noted that the total capital expenditure for extension of airside corridor T2 International & Domestic is ₹ 175 crores in FY 2018-19 with total area of 16,500 Sq.m and per sq. m. cost is ₹ 1,06,061 which is more than normative benchmark of ₹ 65,000 for terminal building.
- 8.15. The Authority requested justification from AAI for higher than normative benchmark costs for extension of airside corridor T2 International and Domestic. AAI, as per the clarification provided dated 11.07.2017, submitted that the cost of terminal building has been assessed as per the specification adopted for the new Integrated Passenger Terminal Building which work out to ₹ 1,05,000 per Sq.m. The civil construction cost is ₹ 73,500 Sq.m and the cost for electrical & mechanical installation works out to ₹ 31,500 per Sq.m.
- 8.16. The Authority proposes to revise the total capital expenditure for extension of F taxi track towards Northern side (₹ 36 crore in FY 2018-19 under runways, taxiways and apron), construction of remote bays Eastern side of main runway (₹ 66 crore in FY 2018-19 under runways, taxiways and apron), extension of Apron on South side of ITB (₹ 22 crore in FY 2018-19 under runways, taxiways and apron) and extension of airside

corridor T2 - International and Domestic (₹ 116 crore in FY 2018-19 under terminal building) based on normative benchmarks for FY 2015-16 and increase the benchmarks by WPI of 4.2% per annum till the year of capitalization as shown in Table 26. The Authority also proposes to undertake a study by technical experts to estimate the allowable capital expenditure for extension of F taxi track towards Northern side, construction of remote bays - Eastern side of main runway, extension of Apron on South side of ITB and extension of airside corridor T2 - International and Domestic visà-vis normative benchmarks. The Authority had asked AAI for detailed information on justification for exceeding the normative benchmarks. Due to lack of detailed information and in the interest of avoiding delays in fixing tariffs, the Authority proposes to determine capital expenditure using normative norms at this stage. The Authority 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 capital expenditure at the time of tariff determination for 3rd control period.

Table 26 – Capital expenditure for terminal building, apron and taxi track as proposed by the Authority

Sr. No.	Asset	Year	Area (sq. m.)	Inflation adjusted normative benchmark cost per unit area (₹ per sq. m.)	Allowed Capex (₹ cr.)
1	Extension of F taxi track towards Northern side	2019	70,000	5,103	36
2	Extension of apron on southern side of ITB	2019	42,300	5,103	22
3	Construction of remote bays - eastern side of main runway	2019	130,000	5,103	66
4	Extension of airside corridor T2 - International & Domestic	2019	16,500	70,575	116

8.17. The Authority proposes to consider terminal building related capital expenditure (₹ 8.3 crore in FY2016-17, ₹ 8.7 crore in FY 2017-18, ₹ 116 crore in FY 2018-19) in 2nd control period based on 92.5% ratio for aeronautical capital expenditure (revised to ₹

- 7.7 crore in FY2016-17, revised to ₹ 8.0 crore in FY 2017-18, revised to ₹ 107.7 crore in FY 2018-19). The Authority noted that the total capital expenditure for Construction of additional floor in Operational Office (₹ 13.0 crore) has been allocated into aeronautical assets using the operational building ratio of 60.35%. The Authority proposes to consider the aeronautical capital expenditure for construction of additional floor in Operational Office (₹ 7.8 crore in FY 2017-18) as provided by AAI. The Authority proposes to consider capital expenditure of construction of sub fire station (₹ 7.1 crore in FY 2017-18) as aeronautical capital expenditure as proposed by AAI.
- 8.18. The Authority proposes to consider Electrical installation capital expenditure related to terminal building (₹ 4.2 crore in FY 2016-17 and ₹ 30.0 crore in FY 2017-18) in 2nd control period based on 92.5% ratio for aeronautical capital expenditure (₹ 3.9 crore in FY 2016-17 and ₹ 27.7 crore in FY 2017-18) instead of 100% aeronautical as submitted by AAI dated 09.05.2017. The Authority proposes to consider the capital expenditure for augmentation of power supply for east side runway (₹ 7.0 crore in FY 2017-18) as aeronautical capital expenditure as proposed by AAI.
- 8.19. The Authority proposes to consider the total aeronautical capital expenditure to be capitalized and added to RAB at ₹ 555.5 crores.

Table 27 - 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	4.8	105.6	163.6	0.0	0.0
2	Roads bridges & culvert	11.4	5.0	0.0	0.0	0.0
3	Terminal building	7.7	23.0	107.7	0.0	0.0
4	Temporary building	0.0	0.3	0.0	0.0	0.0
5	Residential building	0.9	0.0	0.0	0.0	0.0
6	Ancillary building	1.8	1.6	0.0	0.0	0.0
7	Equipment	0.0	2.5	0.0	0.0	0.0
8	Electrical installations	3.9	115.8	0.0	0.0	0.0
	Total (₹ 555.5 crores)	30.4	253.8	271.4	0.0	0.0

8.20. 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 27 subject to true-up of RAB based on actual aeronautical asset addition,outcome of the study mentioned in para 8.12 and the actual costs as per the

tender while determining tariffs for the 3rd control period.

8.21. In the 2nd control period, project works related to extension of F taxi track, construction of remote bays eastern side of main runway, extension of Airside corridor T2-Intenational & Domestic and provision of Solar Power Plant civil works are proposed to be taken up. These require user consultation as per the Guidelines. The Authority expects AAI to provide all the required project information as part of the consultation process with users.

Proposal No. 5. Capital Expenditure

- 5.a. The Authority proposes to consider allowable project cost of ₹ 555.5 crores and accordingly to reckon the amount of ₹ 555.5 crores as addition for total assets during the 2nd control period.
- 5.b. AAI should undertake user stakeholder consultation process for major capital expenditure items as per the Guidelines.
- 5.c. The Authority proposes to true-up the Opening RAB of the next control period depending on the capital expenditure incurred and date of capitalisation of underlying assets in a given year.

9. Depreciation

- 9.1. AAI has submitted that the depreciation rates used are as per AAI's approved accounting policy. The salient aspects of AAI's depreciation policy being followed are as under:
 - 9.1.1. Method of depreciation: straight line;
 - 9.1.2. 100% of depreciation rates of assets if assets are used in a financial year for 180 days or more. If the assets are used for less than 180 days in a year the depreciation is charged at 50% of the depreciation rates. This policy is effective from the financial year 2012-13;
 - 9.1.3. Residual value for each asset is taken as Re.1 balance to be provided by way of depreciation as per prescribed rates.

Authority's Examination

- 9.2. The Authority notes that the depreciation policy of AAI is not in accordance with the depreciation rates adopted by the Authority in other private airports. AAI is a statutory body established under the AAI Act and it does not come under the Companies Act. The Board of AAI has approved the depreciation policy that has been adopted by AAI.
- 9.3. The Authority notes that on some of the assets the depreciation charged by AAI is not in line with the Companies Act 2013. The Authority is of the view that adoption of depreciation rates as prescribed under the Companies Act at any point of time is appropriate, considering the variation in policies adopted by the airport operators. The Authority further notes that there is no specific mention of the classes of assets viz. apron, taxiway and runway in the Companies Act 2013 or 1956 or in the Income Tax Act 1961.
- 9.4. 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 28 - 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	Free hold land	0%	0%	0%
2	Runways, Taxiways & Aprons	13%	3.33%	3.33%
3	Roads bridges & culvert	13%	1.63%	3.33%
4	Terminal building	8%	1.63%	3.33%
5	Cargo complex	8%	1.63%	3.33%
6	Temporary building	100%	100%	33%
7	Residential building	5%	1.63%	3.33%
8	Security fencing – temporary	100%	100%	33%
9	Security fencing wall	8%	1.63%	3.33%
10	Security fencing	8%	1.63%	3.33%
11	Ancillary building	8%	1.63%	3.33%
12	Computer IT & hardware	20%	16.21%	16.67%
13	Software & intangible	20%	20.00%	20.00%
14	Plant & machinery	11%	4.75%	6.67%
15	Tools	20%	4.75%	6.67%
16	Equipment	20%	4.75%	6.67%
17	Vehicle	14%	9.50%	12.50%
18	Heavy vehicles	14%	9.50%	12.50%
19	Vehicle car & jeep	14%	9.50%	12.50%

No.	Asset Class	As per AAI	As per Authority till FY 2014	As per Authority FY2015 onwards
20	Electrical installations	11%	4.75%	10.00%
21	Air conditioning equipment	11%	4.75%	10.00%
22	Electronics installation	11%	4.75%	10.00%
23	Typewriter & other office equipment	18%	4.75%	20%
24	Furniture & fixture	20%	6.33%	10%
25	X ray baggage machine	11%	4.75%	6.67%
26	CFT & fire fighting	13%	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 29 - 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	256.7	324.2	313.9	312.4	327.6	1,535.0
2	As per Authority	142.9	150.5	159.9	162.9	161.7	778.0

Proposal No. 6. Treatment of Depreciation

- 6.a.The Authority proposes to adopt depreciation rates as per Table 28 and depreciation for the 2nd control period as per Table 29.
- 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 30 - Summary of the RAB and Depreciation for NSCBIA (Airport Services) as per AAI for the 2nd control period

	Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Α	Opening Aeronautical RAB	1,694.2	1,438.5	1,758.8	1,444.8	1,212.4
В	Aeronautical Additional Assets capitalized during the year	1.0	644.5	0.0	80.0	255.0
С	Disposals/Transfers					
D	Depreciation	256.7	324.2	313.9	312.4	327.6
F	Closing Aeronautical RAB (A+B-C-D)	1,438.5	1,758.8	1,444.8	1,212.4	1,139.8
	Average RAB (A+E)/2	1,566.4	1,598.6	1,601.8	1,328.6	1,176.1

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 29.
- 10.4. The Authority proposes ₹ 555.5 crores as the addition of aeronautical assets to RAB as detailed in Table 27.
- 10.5. The revised Regulatory Asset Base as calculated by the Authority for 2nd control period under Hybrid Till is as follows:

Table 31 - Summary of forecast and Roll forward RAB and Depreciation for NSCBIA (Airport Services) considered by the Authority for 2nd control period – Hybrid Till

	Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Α	Opening Aeronautical RAB	2,281.1	2,168.6	2,271.8	2,383.3	2,220.4
В	Aeronautical Assets capitalized during the year	30.4	253.8	271.4	0.0	0.0
С	Disposals/Transfers					
D	Depreciation	142.9	150.5	159.9	162.9	161.7
Е	Closing Aeronautical RAB (A+B-C-D)	2,168.6	2,271.8	2,383.3	2,220.4	2,058.7
	Average RAB (A+E)/2	2,224.8	2,220.2	2,327.6	2,301.9	2,139.5

10.6. The Authority proposes to true up the RAB of $2^{\rm nd}$ control period based on actual asset

addition and revised depreciation rates, at the time of determination of tariff for the $3^{\rm rd}$ control period.

Proposal No. 7. RAB for 2nd control period

- 7.a. The Authority proposes to consider RAB for $2^{\rm nd}$ control period as given in Table 31
- 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 apportioned debt for NSCBIA and financing activities are undertaken centrally at the corporate office of AAI.
- 11.3. As per clarifications provided by AAI dated 05.06.2017, total debt on books of AAI is 435 crores and total equity is 13,070 crores as on FY 2015-16. The cost of debt is 8.6% for unsecured non-convertible redeemable bonds to be redeemed in FY 2017-18.

Authority's Examination

- 11.4. The Authority has recognised that AAI's capital structure may not be regarded as an efficient one in that it doesn't optimize the cost of funds from a regulatory perspective. The Authority desires that the FRoR allowed to AAI should come down over a period of time by optimizing capital gearing. The Authority may also consider a normative capital structure to determine the FRoR at a later date. It may not be reasonable to expect AAI to contract large amounts of debt over a short period of time.
- 11.5. The Authority notes that as per a study conducted in respect of the 'Fair Rate of Return Estimation for AAI' in July 2011 it estimated a figure of 14.96% as Fair Rate of Return for AAI. The Authority notes that it has considered FRoR at 14% for Chennai and Kolkata airport in the 1st control period considering the recommendations of another study done by NIPFP. Based on the decision taken for Chennai and Kolkata airport, the Authority considered FRoR at 14% for Guwahati and Lucknow airport for 1st control period.
- 11.6. Based on the above, the Authority proposes to consider FRoR at the rate of 14% for NSCBIA 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 NSCBIA 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 32 - Revenue from Non-aeronautical Services — Projected by AAI for 2^{nd} control period

No.	Revenue from services other than Regulated Services (₹ crore)	2015-16 (base)	2016-17	2017-18	2018-19	2019-20	2020-21
1	Restaurant / Snack Bars	18.4	21.0	24.0	27.3	31.1	35.5
2	Stalls/Retails	6.1	7.0	8.0	9.1	10.3	11.8
3	Duty Free Shop	17.0	19.4	22.2	25.3	28.8	32.8
4	Hoarding & Display	29.4	33.5	38.2	43.5	49.6	56.6
5	Car Rentals	0.5	0.6	0.7	0.8	0.9	1.0
6	Other Misc. Items	10.7	12.1	13.8	15.8	18.0	20.5
Α	Total Trading Concessions (1+2+3+4+5+6)	82.2	93.7	106.8	121.7	138.8	158.2
7	Land Rent & Leases	45.1	48.4	52.1	56.0	60.2	64.7
8	Hangers	8.9	9.7	10.7	11.8	13.0	14.3
9	Terminal Building & Building Non-Residential	21.0	24.0	27.3	31.2	35.5	40.5
10	Car Parking	10.8	12.3	14.0	16.0	18.2	20.8
11	Admission Tickets	1.3	1.5	1.7	1.9	2.2	2.5
12	Other Miscellaneous Income	5.5	6.3	7.2	8.2	9.3	10.6
13	Rest Rooms	0.5	0.5	0.6	0.7	0.8	0.9
14	Revenues from Interest Income	0.0	0.0	0.0	0.0	0.0	0.0
15	Interest On Staff Advances	0.4	0.4	0.4	0.5	0.5	0.6
16	License Fee Recovery From Employees	0.1	0.1	0.1	0.1	0.1	0.1
17	Recovery Telephone Charges	0.0	0.0	0.0	0.0	0.0	0.0
	Total	175.7	302.8	341.6	385.6	435.4	491.9

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

Table 33 – Assumption (growth rates) for Service other than Regulated Services for the 2^{nd} Control Period as per AAI

No.	Particular	2016-17	2017-18	2018-19	2019-20	2020-21
1	Restaurant / Snack Bars	14%	14%	14%	14%	14%
2	Stalls/Retails	14%	14%	14%	14%	14%
3	Duty Free Shop	14%	14%	14%	14%	14%
4	Hoarding & Display	14%	14%	14%	14%	14%
5	Car Rentals	14%	14%	14%	14%	14%
6	Other Misc. Items	14%	14%	14%	14%	14%
7	Land Rent & Leases	7.5%	7.5%	7.5%	7.5%	7.5%

No.	Particular	2016-17	2017-18	2018-19	2019-20	2020-21
8	Hangers	10%	10%	10%	10%	10%
9	Terminal Building & Building					
	Non-Residential	14%	14%	14%	14%	14%
10	Car Parking	14%	14%	14%	14%	14%
11	Admission Tickets	14%	14%	14%	14%	14%
12	Other Miscellaneous Income	14%	14%	14%	14%	14%
13	Rest Rooms	14%	14%	14%	14%	14%
14	Revenues from Interest Income	10%	10%	10%	10%	10%
15	Interest On Staff Advances	10%	10%	10%	10%	10%
16	License Fee Recovery From					
	Employees	10%	10%	10%	10%	10%
17	Recovery Telephone Charges	10%	10%	10%	10%	10%

Authority's Examination

- 12.3. The Authority noted that other miscellaneous items (line item 6 in Table 32) and total trading concessions (line item A in Table 32) have been added to total non-aero revenues twice in the total non-aeronautical revenues calculated by AAI. The Authority requested for clarification from AAI for the same. As per the clarification provided dated 30.08.2017, AAI submitted that the other miscellaneous items and total trading concessions (line item 6 and line item A in Table 32) have been inadvertently mapped twice to total non-aeronautical revenues and the same can be corrected. Accordingly, the Authority proposes to change the non-aeronautical revenues as discussed with AAI.
- 12.4. The Authority noted that as part of clarifications provided dated 09.05.2017, AAI has revised the growth rates to 10% (from 14% as submitted earlier) for revenues from services other than regulated services all the revenues except for land lease revenues and other miscellaneous revenues as per contractual arrangements. The Authority proposes to consider the revised growth rates as submitted by AAI dated 09.05.2017 for the determination of tariff for the 2nd control period.
- 12.5. The Authority proposes that non-aeronautical revenues will be trued up if it is higher than the projected revenues. In case there is a shortfall, true-up would be undertaken only if the Authority is satisfied that there are reasonably sufficient grounds for not realizing the projected revenues. The Authority proposes to accept the revenues from services other than regulated services as submitted by AAI except for adjustments as

detailed below.

Adjustment of lease rentals

12.6. AAI has allotted following land to cargo, ground handling and fuel companies (CGF) for their operations. AAI has considered income from such land lease as non-aeronautical revenues

Table 34 - Details of land allotted to cargo, ground handling and supply of fuel service providers in 2^{nd} control period

Service	Service Provider	Land Allocated (Sq.m)		Land Lease revenues (FY 2015-16) ₹ crore
		Paved Unpaved		
Fuel	IOCL	33,550	-	24.4
Fuel	BPCL	6,807	-	4.8
Fuel	HPCL	5,546	-	3.9
Fuel	Reliance Industries	3,840	-	2.8
Ground Handling	Bhadra	1,250	-	1.0

- 12.7. Additionally, AAI has allotted 44.6 Sq.m. of space in Terminal building to GHA.
- 12.8. 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 all the cargo operations at Kolkata Airport. 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 09.05.2017 and 29.05.2017, 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 Kolkata Airport. The Authority proposes to consider the dividends/ profits received by AAI from AAICLAS, 100% subsidiary of AAI, as aeronautical revenues during the true-up of 2nd control period.
- 12.9. As per the provisions of the AERA Act, services rendered in respect of cargo, ground handling and fuel supply are aeronautical services.
- 12.10. The Authority noted that AAI in submission dated 09.05.2017 has increased land lease rentals from cargo, ground handling agencies and oil companies by 7.5% per annum and proposes to accept the same. The Authority noted that AAI has increased

- rent revenues from building non-residential for GH agencies by 10% and proposes to accept the same.
- 12.11. The Authority proposes to consider land lease revenues and building non-residential rent revenues on account of the aeronautical services of CGF as aeronautical revenue.

Adjustment for increase in retail area

- 12.12. As part of the clarifications provided by AAI dated 09.05.2017, AAI submitted that tender for proposed additional retail area of 452 Sq.m with MRLF is under process and corresponding additional revenues starting with FY 2017-18 to be considered in the MYTP for 2nd control period.
- 12.13. The Authority noted that hangars charges have been considered as non-aeronautical revenues and hangar assets have been excluded from Regulatory Asset Base.
- 12.14. The Authority observes that non-aeronautical revenue at NSCBIA 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 35 – 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)	302.8	341.6	385.6	435.4	491.9
Adjustment:					
Correction for double counting of certain revenues as mentioned in Para 12.3 (B)	102.1	112.3	123.5	135.9	149.5
Change in revenue from cargo, ground handling and fuel services considered as aeronautical revenues (C)	41.4	44.5	47.9	51.6	55.5
Increase in revenues due to additional retail area (D)	0.0	2.2	4.7	5.1	5.7
Change in revenues due to change in growth rate (E)	8.8	14.7	22.6	37.1	54.9
Non-Aeronautical Revenues as per Authority (A-B-C+D-E)	150.5	167.8	186.9	205.7	226.4

Proposal No. 9. Non Aeronautical Revenues

- 9.a. The Authority proposes to consider the revenues accruing to AAI on account of the aeronautical services of Cargo facility, Ground Handling Services and Supply of fuel to aircraft (FTC) including land lease rentals and building rent from these activities as aeronautical revenue.
- 9.b. The Authority proposes to consider the Non Aeronautical Revenue as per Table 35
- 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. The expenditure related to cargo operations has not been considered in 2nd control period while determining RAB.
- 13.2. Summary of aeronautical expenses proposed by AAI for 2nd control period is as below:

Table 36 - Summary of Aeronautical O&M expenditure as submitted by AAI for 2^{nd} control period on Hybrid Till

No.	Particulars (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
1	Pay roll Expenditure of NSCBIA	123.9	154.9	167.4	181.0	195.7
2	Expenditure for NSCBIA					
	employees' retirement benefits	23.6	29.6	31.0	32.6	34.2
	allocated at CHQ					
3	Common Expenses related to	1.2	1.5	1.7	1.8	1.9
	cargo, commercial and land	1.2	1.5	1.7	1.0	1.9
Α	Total Pay roll Expenditure	146.3	182.9	196.8	211.8	228.0
	(1+2-3)	140.5	102.9	190.8	211.0	220.0
4	Administrative and General	10.1	11.0	12.1	13.2	14.5
	Expenditure	10.1	11.0	12.1	15.2	14.5
	Apportionment of administration					
5	& General expenditure of	35.8	37.6	39.5	41.4	43.5
	CHQ/RHQ					
В	Total Administration & General	45.9	48.6	51.5	54.6	58.0
	Expenditure(4+5)	43.3	40.0	31.3	34.0	36.0
С	Repairs and Maintenance	43.0	47.3	52.1	57.3	63.0
	Expenditure (Total)	45.0	47.5	32.1	37.3	03.0
6	Power Charges	56.3	56.3	56.3	56.3	56.3
7	Water Charges	12.8	14.1	15.5	17.0	18.7
D	Utility and Outsourcing	69.1	70.4	71.8	73.3	75.1
	Expenditure (6+7)	09.1	70.4	/1.8	/5.5	/5.1
E	Other Outflows	53.8	26.0	1.3	1.4	1.5
	Total (A+B+C+D+E)	358.2	375.3	373.4	398.4	425.6

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

Table 37 – Assumptions made by AAI for each item of O&M expenditure

No.	Particular	2016-	2017-	2018-	2019-	2020-
		17	18	19	20	21

No.	Particular	2016-	2017- 18	2018-	2019-	2020-
1	Payroll Expenses [*]	17	19	19	20	21
-		00/	250/	00/	00/	00/
	Salaries and Wages	9%	25%	9%	9%	9%
	PF contribution	9%	25%	9%	9%	9%
	Fringe benefits including perks & medical	9%	25%	9%	9%	9%
	expenses	370	23/0	370	370	370
	Overtime and other staff costs	5%	25%	5%	5%	5%
	Allocation of Retirement Benefit provided		250/	F0/	F0/	F0/
	at CHQ in r/o NSCBIA Employees		25%	5%	5%	5%
2	R&M Expenses	10%	10%	10%	10%	10%
3	Utility and outsourcing Expenditure					
	Power charges	0%	0%	0%	0%	0%
	Other outsourcing costs	10%	10%	10%	10%	10%
4	Administration and General Expenditure					
	Admin & General Expenses	10%	10%	10%	10%	10%
	Apportionment of CHQ/RHQ Expenses		5%	5%	5%	5%
	Municipal Taxes	16%	0%	0%	0%	0%
	License Fees	0%	0%	0%	0%	0%
5	Other Outflows					
	Consumption of stores and spares	10%	10%	10%	10%	10%

^{*} 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 38 – O&M Expense allocation as submitted by AAI

Sr. No.	Particulars	Aero Expense	Non-Aero Expense
1	Payroll Expenses - Non-CHQ	91%	9%
2	Payroll Retirement benefit expenses Apportionment – CHQ	100%	0%
3	Admin and General Expenses – Non CHQ	96%	4%
4	Admin and General overheads Expenses Apportionment – CHQ/RHQ	100%	0%
5	R&M Expenses	90%	10%
6	Utility and Outsourcing Charges	92%	8%
7	Other Outflows	93%	7%

Sr. No.	Particulars	Aero Expense	Non-Aero Expense
	Total	93%	7%

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, medical benefits and PF contribution have been increased by AAI at the growth rate of 9% annually for 2nd control period except for FY 2017-18. These growth rates appear to be on a higher side. The Authority proposes 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 NSCBIA 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 NSCBIA 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 due to tentative increase in salary and wages on account of wage revision. However, as part of clarifications provided dated 09.05.2017, 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 the order issued for Trivandrum 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 2^{nd}

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

Segregation of aeronautical expenses

- 13.7. The Authority proposes to adopt ratio of 95% as aeronautical costs to allocate payroll expenses after excluding cargo employees' costs based on ratio of cargo employees to total airport employees.
- 13.8. The Authority noted that apportionment of retirement benefits provided in CHQ in respect of Kolkata airport and apportionment of admin CHQ expenses have been considered as 100% aeronautical expenses. The Authority proposes to use the ratio of 90% to 10% for aeronautical and non-aeronautical allocation for apportionment of admin CHQ/RHQ expenses after excluding cargo employees' costs on revenue basis. The Authority proposes to use the ratio of 95% to 5% for aeronautical and non-aeronautical allocation for retirement benefits provided at CHQ in respect of employees at Kolkata airport after excluding cargo employees' costs based on ratio of cargo employees to total airport employees.
- 13.9. The Authority noted that the expenses related to vehicles such as R&M Vehicles, consumption of petrol/ lubricant, vehicle insurance, vehicle hire charges etc. have been considered 100% aeronautical expense. The Authority proposes to allocate aforementioned expenses using employee ratio into aeronautical and non-aeronautical expenses.
- 13.10. Terminal Area ratio for calculation of aeronautical assets is proposed as 92.5%. This ratio has been applied to specific expenses in R&M Civil, R&M Electrical and Conservancy Charges.
- 13.11. The Authority noted that certain expenses have been categorized as Project related expenses and have been considered as 100% aeronautical expenses. The Authority requested clarifications from AAI for the same. As per the clarifications provided by AAI dated 09.05.2017, AAI submitted that the project related costs is considered 100% aeronautical because Kolkata project employees works exclusively for Kolkata Airport.

As part of further clarifications provided by AAI dated 29.05.2017, AAI submitted that the project employees mainly perform capital works and maintenance works of Kolkata Airport. Project employees primarily comprises of civil and electrical engineers. Based on the clarifications received from AAI, the Authority proposes to consider O&M expenses related to project based on ratio of 95% as aeronautical costs after excluding cargo employees' costs based on ratio of cargo employees to total airport employees.

13.12. The Authority also noted that cargo expenses have not been included as part of MYTP calculation and requested clarifications from AAI for the same. As per the clarifications provided by AAI dated 09.05.2017, AAI submitted that cargo assets, expenses and income have not been considered in the 2nd control period as AAICLAS would file proposal for cargo tariff for 2nd control period separately.

Correction in projection

- 13.13. The Authority noted that AAI has included financing charges as part of O&M expenses for the 2nd control period. The Authority proposes not to include interest payments on long term debt as a component of O&M expenses.
- 13.14. AAI submitted vide their submissions dated 29.06.2017 that the R&M − Civil Works expenses have to be increased by ₹ 35.68 crore in FY 2016-17 and ₹ 4.39 crore in FY 2017-18 for civil work expenses incurred for strengthening of main runway. The Authority has revised the R&M − Civil Works expenditure accordingly.
- 13.15. The Authority also noted that AAI has proposed to incur capital expenditure towards solar power plant which is expected to commission from 01.08.2017. The Authority requested AAI to provide the estimated reduction in power cost due to the commissioning of solar power plant. As per clarification provided by AAI dated 11.07.2017, AAI submitted that on commissioning of the solar power plant, there will not be any change in the current power tariff from the DISCOM (i.e., CESC), but based on the actual solar power generation and consumption at AAI and excess power injection into CESC power grid, there could be reduction in the monthly CESC bills, which is anticipated to be approx. average ₹ 75 to 80 lakhs per month at present tariff. The Authority therefore proposes to reduce the power costs by ₹ 80 lakhs per month from 01.08.2017.

13.16. The O&M expenditure for FY2015-16 which includes both aeronautical and non-aeronautical expense is given in the table below:

Table 39 – Total O&M expenditure for FY 2015-16 as proposed by the Authority

No.	Particulars (₹ crore)	2015-16
1	Pay roll Expenditure of NSCBIA	125.9
2	Expenditure for NSCBIA employees' retirement benefits	22.5
	allocated at CHQ	
3	Less - Common Expenses related to cargo, commercial and	0
	land	0
Α	Total Pay roll Expenditure (1+2-3)	148.4
4	Administrative and General Expenditure	9.6
	Apportionment of administration & General expenditure of	10.0
5	CHQ/RHQ	19.8
В	Total Administration & General Expenditure(4+5)	29.3
С	Repairs and Maintenance Expenditure (Total)	43.3
6	Power Charges	61.9
7	Others	12.4
D	Utility and Outsourcing Expenditure (6+7)	74.3
E	Other Outflows	1.0
	Total (A+B+C+D+E)	296.3

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

Table 40 – Expense allocation between aeronautical and non-aeronautical services proposed by the Authority

Sr. No.	Particulars	Aero Expense	Non-Aero & Cargo Expense
1	Payroll Expenses - Non-CHQ	88%	12%
2	Payroll Retirement benefit expenses Apportionment – CHQ	88%	12%
3	Admin and General Expenses – Non CHQ	96%	4%
4	Admin and General overheads Expenses Apportionment – CHQ/RHQ	85%	15%
5	R&M Expenses	89%	11%
6	Utility and Outsourcing Charges	91%	9%
7	Other Outflows	93%	7%
	Total	89%	11%

13.18. 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 41 - 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 NSCBIA	118.0	147.5	157.1	167.4	178.3
2	Expenditure for NSCBIA employees' retirement benefits allocated at CHQ	21.2	26.5	28.4	30.3	32.5
3	Less - Common Expenses related to cargo, commercial and land	1.2	1.4	1.5	1.6	1.8
Α	Total Pay roll Expenditure (1+2-3)	138.0	172.5	183.9	196.1	209.0
4	Administrative and General Expenditure	10.1	11.0	12.1	13.2	14.5
5	Apportionment of administration & General expenditure of CHQ/RHQ	17.6	18.5	19.5	20.4	21.4
В	Total Administration & General Expenditure(4+5)	27.7	29.5	31.5	33.6	35.9
С	Repairs and Maintenance Expenditure (Total)	78.1	51.1	51.3	56.5	62.1
6	Power Charges	56.3	49.9	46.7	46.7	46.7
7	Others	12.6	13.9	15.3	16.8	18.5
D	Utility and Outsourcing Expenditure (6+7)	69.0	63.8	62.0	63.6	65.2
Ε	Other Outflows	1.0	1.1	1.2	1.3	1.5
	Total (A+B+C+D+E)	313.8	318.1	330.0	351.1	373.8

- 13.19. 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.
- 13.20. It appears that O&M expenditure at NSCBIA is on higher side and expects AAI to reduce the O&M expenditure over a period of time.

Proposal No. 10. Operation and Maintenance expenditure

- 10.a. The Authority proposes to consider the operational and maintenance expenditure as given in Table 41 above, for the purpose of determination of aeronautical tariffs for the 2nd control period.
- 10.b. The Authority expects AAI to reduce O&M expenditure over a period of time.

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

14. Taxation

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

Authority's Examination

Adjustment for 30% of non-aeronautical revenues

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

Adjustment of aeronautical capital expenditure

14.3. The Authority proposes to consider aeronautical capital expenditure of ₹ 555.5 crores as given in Table 27 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 41.

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 12.11

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 42 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	59.5	81.6	123.9	158.5	192.0	615.5
As per Authority	85.7	133.6	187.1	228.9	282.0	917.4

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

Table 43 - Amount of Tax for aeronautical services as calculated by the Authority for the 2^{nd} control period - Hybrid Till

Particular (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Aeronautical Revenues	752.8	892.7	1,072.4	1,206.5	1,358.5
Aeronautical O&M (excluding CHQ/ RHQ Overheads)	275.0	273.1	282.2	300.3	319.9
CHQ/ RHQ Overheads	38.8	45.0	47.8	50.8	53.9
Depreciation as per IT Act	191.2	188.5	201.5	193.8	169.5
PBT	247.8	386.1	540.9	661.6	815.1
Tax for aeronautical services	85.7	133.6	187.1	228.9	282.0

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

Proposal No. 11. Taxation

- 11.a. The Authority proposes the corporate tax for aeronautical activities as per Table 43 for the 2nd control period.
- 11.b. The Authority proposes to true up the difference between the actual/ apportioned corporate tax paid and that estimated by the Authority for the 2nd control period during determination of tariffs for the 3rd control period.

15. Aggregate Revenue Requirement for Second control period

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

Table 44 - ARR and Yield as per AAI for the 2nd control period – Hybrid Till

Details (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Average Aeronautical RAB	1,566.4	1,598.6	1,601.8	1,328.6	1,176.1
Return on Average Aeronautical RAB@14%	219.3	223.8	224.3	186.0	164.7
Aeronautical Operating Expenditure	358.2	375.3	373.4	398.4	425.6
Depreciation on aeronautical RAB	256.7	324.2	313.9	312.4	327.6
Aeronautical Corporate Tax @34.60%	59.5	81.6	123.9	158.5	192.0
Less- 30% of Non-Aeronautical	90.8	102.5	115.7	130.6	147.6
Revenues	90.8	102.5	115.7	130.0	147.0
ARR as per AAI	802.8	902.4	919.8	924.8	962.3
Total ARR as per AAI					4,512.2
No. of Passengers (as per Actual/Projected)	14,120,371	15,463,889	16,936,961	18,552,209	20,323,490
Discounted ARR	802.8	791.6	707.8	624.2	569.8
True up short fall in 1 st control period as on 01.04.2016	2,225.4				
PV of ARR for the control period as on 01.04.2016					5,721.6
Total Passengers during the					
control period	85,396,920				
Yield per passenger for the control period (PV of ARR for the control period/Total passengers during the control period) 670					

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 45 - 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	2,224.8	2,220.2	2,327.6	2,301.9	2,139.5
Return on Average Aeronautical RAB@14%	311.5	310.8	325.9	322.3	299.5
Aeronautical Operating Expenditure	313.8	318.1	330.0	351.1	373.8
Depreciation on aeronautical RAB	142.9	150.5	159.9	162.9	161.7
Aeronautical Corporate Tax @34.6%	85.7	133.6	187.1	228.9	282.0
Less – 30% of Non-Aeronautical Revenues	45.1	50.3	56.1	61.7	67.9
True up short fall in 1 st control	899.9				
period as on 01.04.2016					
ARR as per Authority	1,708.7 862.7 946.9 1,003.5				1,049.2
Total ARR as per Authority				1	5,570.9
Discounted ARR	1,708.7	756.7	728.6	677.3	621.2
PV of ARR for the control period as on 01.04.2016					4,492.5
No. of Passengers (as per Projected)	15,819,539	17,499,473	19,361,205	21,424,662	23,711,970
Total Passengers during the control period				9	97,816,847
Yield per passenger for the control pe period/Total passengers during the c	rol period (PV of ARR for the control gthe control period) 459.3				
Target yield per passenger	555.4	578.7	602.9	628.2	654.5
Target Aeronautical Revenues	878.6	1,012.7	1,167.3	1,345.9	1,552.0
PV of Target Aeronautical Revenues	4,492.5				

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 NSCBIA.

 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 AAI has not considered any revenue from cargo as part of aeronautical revenues for the 2nd control period. As per the clarifications provided dated 09.05.2017 and 29.05.2017, AAI submitted that no cargo revenue is received by AAI from AAICLAS during the 2nd control period.
- 16.5. 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.
- 16.6. The Authority noted that if the existing tariffs applicable at Kolkata airport are not increased for the second control period, there will be shortfall of ₹ 872.4 crore vis-à-vis ARR. The shortfall can either be met by increasing various aeronautical charges such as Landing, Parking & Housing and fuel throughput or increasing UDF or both. Even with the increased landing, parking & housing charges, fuel throughput charges and introduction of aerobridge charges, there is still aeronautical revenues shortfall left vis-à-vis ARR for which the UDF is increased to reduce the gap. After considering the revised landing, parking & housing, fuel throughput charges and aerobridge charges as proposed by AAI applicable from 01.10.2017, the resultant shortfall is INR ₹ 709.9 crore without the revised UDF. To reduce the remaining shortfall, AAI has proposed the revised UDF of ₹ 518 per departing domestic passenger and ₹ 1,246 per departing international passenger as given in Table 46.
- 16.7. 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 46 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
Rate per landing - International	Flight		
Up to 100 MT	₹ 650.40 per MT		
Above 100 MT	₹ 65,040 + ₹ 874		
	per MT in excess of		
	100 MT		
Up to 25 MT		₹ 715 per MT	₹ 715 per MT
		₹ 17,875 + ₹ 790	₹ 17,875 + ₹ 790
Above 25 MT up to 50 MT		per MT in excess of	per MT in excess of
		25 MT	25 MT
		₹ 37,625 + ₹ 865	₹ 37,625 + ₹ 865
Above 50 MT up to 100 MT		per MT in excess of	•
		100 MT	100 MT
		₹ 80,875 + ₹ 950	₹ 80,875 + ₹ 950
Above 100 MT up to 200 MT		per MT in excess of	<u> </u>
		100 MT	100 MT
			₹ 1,75,875 + ₹ 1,050
Above 200 MT		·	per MT in excess of
Data and a disconsideration	1.1	200 MT	200 MT
Rate per Landing - Domestic Flig			
	₹ 331.30 per MT		
Above 100 MT	₹ 33,130 + ₹ 445.10		
	per MT in excess of 100 MT		
Up to 25 MT	100 1011	₹ 370 per MT	₹ 370 per MT
Ορ το 23 Ιντί		₹ 9,250 + ₹ 430 per	
Above 25 MT up to 50 MT		· ·	MT in excess of 25
Above 25 IVII up to 50 IVII		MT	MT
		₹ 20,000 + ₹ 500	₹ 20,000 + ₹ 500
Above 50 MT up to 100		· ·	per MT in excess of
·		50 MT	50 MT
		₹ 45,000 + ₹ 570	₹ 45,000 + ₹ 570
Above 100 MT up to 200 MT		per MT in excess of	per MT in excess of
		100 MT	100 MT
		₹ 1,02,000 + ₹ 660	₹ 1,02,000 + ₹ 660
Above 200 MT		'	per MT in excess of
		200 MT	200 MT
Housing Charges	T	T	1
Up to 100 MT	₹ 17.60 per MT per	₹ 28.2 per MT per	₹ 28.2 per MT per
	hour	hour	hour
Above 100 MT	₹ 1,760 + ₹ 23.60	₹ 2,820 + 37.80 per	•
	per MT per hour in	MT per hour in	MT per hour in

Particular	Existing Tariff	Revised tariff by AAI	Revised tariff proposed by Authority	
	excess of 100 MT	excess of 100 MT	excess of 100 MT	
Parking Charges				
Up to 100 MT	₹9 per MT per hour	₹14.4 per MT per	₹14.4 per MT per	
		hour	hour	
Above 100 MT	₹ 900 + ₹ 11.80 per	₹ 1,440 + ₹ 18.80	₹ 1,440 + ₹ 18.80	
	MT per hour in	per MT per hour in	per MT per hour in	
	excess of 100 MT	excess of 100 MT	excess of 100 MT	
Throughput Charges				
Rate per KL	₹ 1,478.94	₹ 1,478.94	₹ 1,478.94	
Aerobridge Charges				
Domestic flight	Nil	₹ 2,000 per hour	₹ 2,000 per hour	
International flight	Nil	₹ 4,000 per hour	₹ 4,000 per hour	
Passenger Service Fee (PSF) – Fa	acilitation			
Domestic Passenger	Nil	₹ 518	Nil	
(per embarking passenger)	Nil	\$ 8.63	Nil	
International Passenger	Nil	₹ 1,246	Nil	
(per embarking passenger)	Nil	\$ 20.77	Nil	
User Development Fee (UDF) (U	IDF proposed by Aut	hority instead of PSI	F(FC) above)	
Domestic Passenger (per embarking passenger)	₹ 449	Nil	₹ 518	
International Passenger	T 4 404		Ŧ 1 216	
(per embarking passenger)	₹ 1,124	Nil	₹ 1,246	
Passenger Service Fee (PSF) – Security*				
Domestic Passenger	₹ 130	₹130	₹ 130	
(per embarking passenger)	\$ 3.25	\$ 3.25	\$ 3.25	
International Passenger	₹130	₹130	₹130	
(per embarking passenger)	\$ 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

- 16.8. 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.
 - 16.8.1. Yearly increase of 4% per annum every subsequent year (FY 2018-19 onwards) in UDF per departing passenger charges
 - 16.8.2. Yearly increase of 4% every subsequent year (FY 2018-19 onwards) in landing charges
 - 16.8.3. Yearly increase of 5% every subsequent year (FY 2018-19 onwards) in Parking

and housing charges

- 16.9. The Authority noted that AAI's proposed tariff applicable from 01.10.2017 will not be able to recover the proposed ARR for the 2nd control period. Hence, the Authority proposes to accept the revised tariffs as submitted by AAI which would be applicable from 01.10.2017. The estimated aeronautical revenues based on tariffs as proposed by AAI is indicated in Table 47.
- 16.10. The Authority notes that revenue from tariff as proposed by AAI would not meet aeronautical revenue permissible for the 2nd control period. The resultant shortfall as on 01.04.2016 is ₹ 512.8 crores. The Authority proposes to consider the shortfall of ₹ 512.8 crores as on 01.04.2016 in the 2nd control period while determining tariffs for the 3rd control period.

Table 47 - Projected Revenue, Target Revenue and shortfall as per the Authority for the 2nd control period

Projected Aero Revenue based on AAI proposed tariffs (₹ crore)	2016-17	2017-18	2018-19	2019-20	2020-21
Landing (A)	192.3	231.0	285.0	315.8	349.9
Parking and Housing (B)	4.6	6.5	8.9	10.0	11.2
UDF/PSF as per existing rates (C)	430.4	473.4	520.8	573.2	631.0
FTP+ITP and lease rentals (D)	83.7	89.7	96.1	103.0	110.4
Ground Handling charges and lease rentals (E)	29.4	31.4	33.7	36.1	38.6
CUTE (F)	12.4	13.7	15.1	16.7	18.5
Cargo charges (G)	0.0	0.0	0.0	0.0	0.0
Aerobridge charges (H)	0.0	13.7	15.3	17.2	19.2
Total Projected Revenue as per existing UDF/PSF (I = A+B+C+D+E+F+G+H)	752.8	859.4	975.0	1,072.0	1,178.9
Target Aero Revenue	858.3	989.2	1,140.3	1,314.7	1,516.0
Short fall (-)/ Excess (+) in revenue, i.e. difference (Projected – Permissible)	-105.5	-129.8	-165.2	-242.7	-337.0
PV value as on 01.04.2016 with Discount rate (14.00%)	-105.5	-113.9	-127.1	-163.8	-199.6
Total PV of difference as on	-709.9				
01.04.2016 for the control period		Т	Т	Т	
UDF as per revised rates (J)	430.4	506.7	618.2	707.7	810.5

Total Projected Revenue as per revised UDF (K = I-C+J)	752.8	892.7	1,072.4	1,206.5	1,358.5
Target Aero Revenue	878.6	1,012.7	1,167.3	1,345.9	1,552.0
Short fall (-)/ Excess (+) in revenue, i.e. difference (Projected – Permissible)	-125.9	-120.0	-95.0	-139.4	-193.5
PV value as on 01.04.2016 with Discount rate (14.00%)	-125.9	-105.2	-73.1	-94.1	-114.6
Total PV of difference as on 01.04.2016 for the control period					-512.8

- 16.11. 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%.
- 16.12. The Authority proposes that any shortfall/ excess in revenues for the 2nd control period based on proposed tariffs by AAI to be considered while determining aeronautical tariffs for the 3rd control period.
- 16.13. The Authority notes that ASQ rating at Kolkata has been marginally less than 3.75 for few quarters of 1st control period. However, the Authority further notes that in majority of the quarters in 2nd control period the quarterly ASQ rating is more than 3.75 as required under Section 6.14.3 of Airport Guidelines. The Authority expects AAI to maintain ASQ rating above 3.75 in 3rd control period. Details of the ASQ ratings are provided below.

Table 48 – Quarterly ASQ rating of NSCBIA during the 1st control period

Quarter	2012	2013	2014	2015	2016
Q1	-	3.01	4.22	4.71	4.80
Q2	-	3.84	4.42	4.73	4.72
Q3	-	4.05	4.66	4.76	4.73
Q4	2.96	4.11	4.66	4.78	4.73
Average	-	3.75	4.49	4.75	4.75

Proposal No. 12. Tariff rate card

- 12.a. To accept Annual Tariff Proposals as given in Table 46 (and Annexure) for determination of tariff during 2nd control period as the present value of proposed revenues (yield) by AAI is lower than the present value of ARR (yield) as per Authority. 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 9th Feb.2004 in order to encourage and promote intra-regional connectivity at NSCBIA.
- 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

Email: puja.jindal@nic.in

(S. Machendranathan) Chairperson

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I) LANDING CHARGES

Rate per landing - International Flight

Weight of the Aircraft	Proposed - Rate Per Landing (In ₹)	
Up to 25 MT	₹715 per MT	
Above 25 MT up to 50 MT	₹ 17,875 + ₹ 790 per MT in excess of 25 MT	
Above 50 MT up to 100	₹ 37,625 + ₹ 865 per MT in excess of 100 MT	
Above 100 MT to 200 MT	₹ 80,875 + ₹ 950 per MT in excess of 100 MT	
Above 200 MT	₹ 1,75,875 + ₹ 1,050 per MT in excess of 200 MT	

Rate per Landing - Domestic Flight

Weight of the Aircraft	Proposed - Rate Per Landing (In ₹)	
Up to 25 MT	₹ 370 per MT	
Above 25 MT up to 50 MT	₹ 9,250 + ₹ 430 per MT in excess of 25 MT	
Above 50 MT up to 100	₹ 20,000 + ₹ 500 per MT in excess of 50 MT	
Above 100 MT to 200 MT	₹ 45,000 + ₹ 570 per MT in excess of 100 MT	
Above 200 MT	₹ 1,02,000 + ₹ 660 per MT in excess of 200 MT	

II) PARKING AND HOUSING CHARGES

	Proposed Rates (In ₹)	Proposed Rates (In ₹)
Weight of the Aircraft	Parking Charges Rates per Hour	Housing Charges Rates per Hour
Up to 100 MT	₹ 14.4 per MT per hour	₹ 28.2 per MT per hour
Above 100 MT	₹ 1,440 + ₹ 18.80 per MT per hour in excess of 100 MT	₹ 2,820 + 37.80 per MT per hour in excess of 100 MT

Note

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

	Proposed
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 Kolkata 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 Rate Per KL (IN ₹)
₹ 1,478.94

IV) AEROBRIDGE CHARGES

Aerobridge charges are payable for each usage as per rates given below:

	Proposed rate per hour
Domestic Flight	₹ 2,000
International Flight	₹ 4,000

- a) For calculating chargeable Aerobridge usage time, any part of an hour shall be rounded off to the next hour.
- b) Charges for each usage shall be rounded off to the nearest Rupee.

V) 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 INR 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 INR the rate as on 1st day of the month for 1st
	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.

VI) USER DEVELOPMENT FEE (UDF)

Particulars	Proposed
Domestic Embarking Passenger	₹ 518
International Embarking Passenger	₹ 1,246

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

VII) 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.

VIII) 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.